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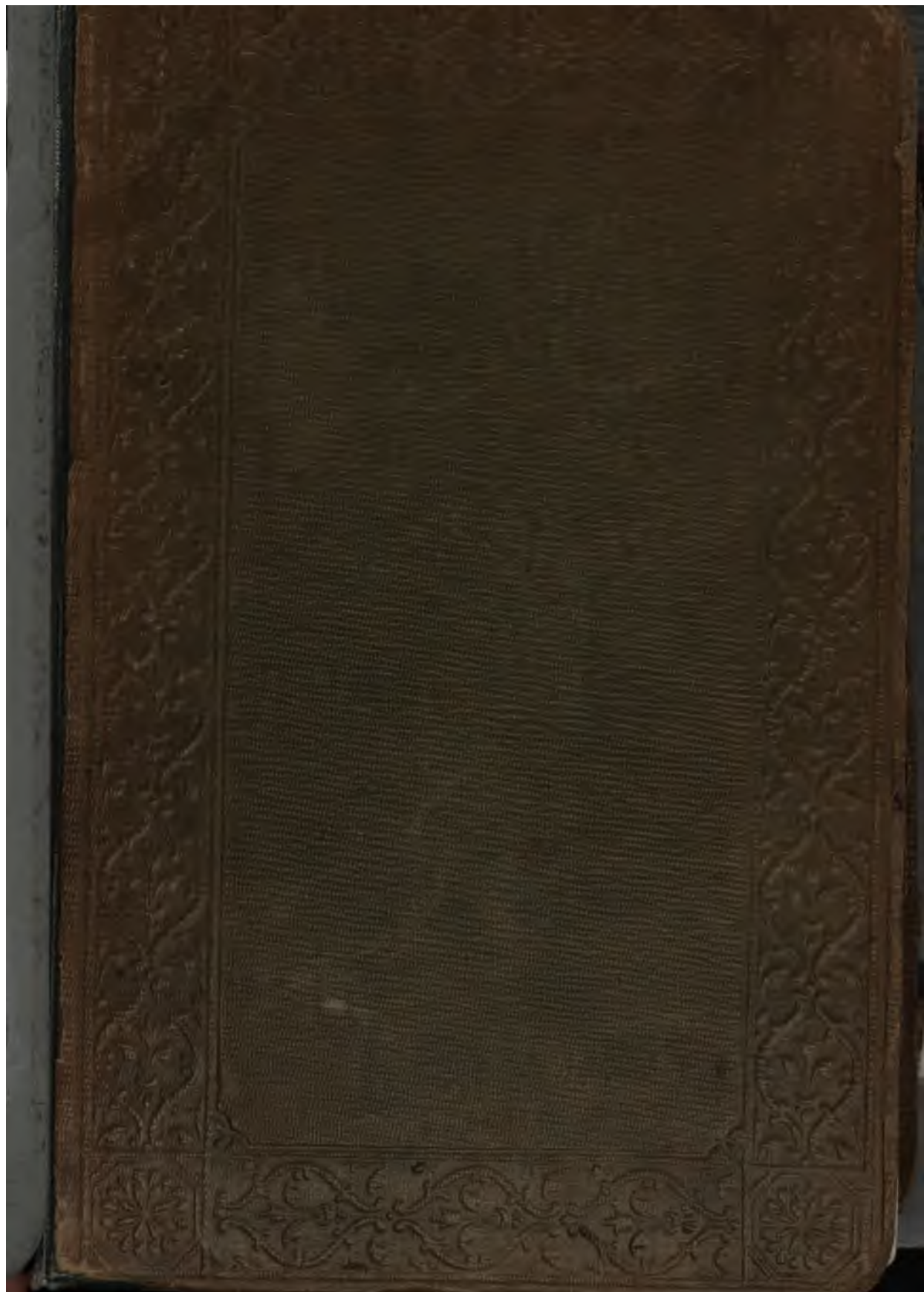
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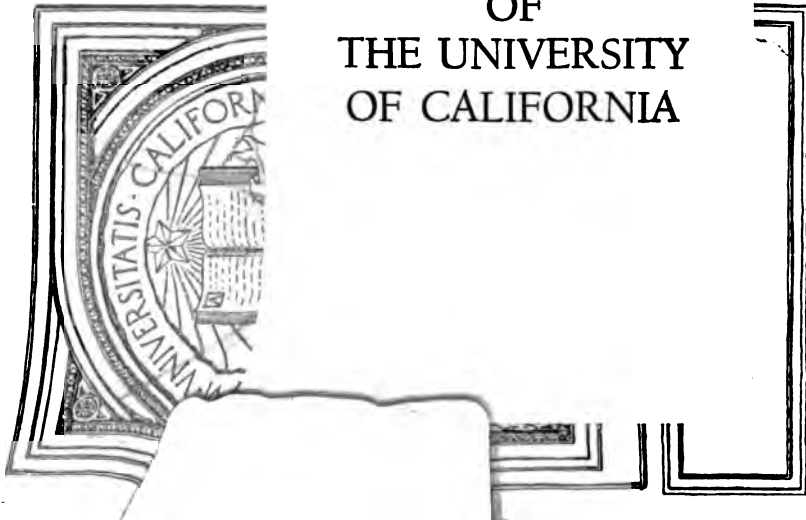


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DE BOW'S REVIEW

AND

Industrial Resources, Statistics, etc.

DEVOTED TO

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EDUCATION, POLITICAL ECONOMY, GENERAL LITERATURE, ETC.

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EDITED BY

J. D. B. DE BOW,

PROFESSOR OF POLITICAL ECONOMY, ETC., IN THE UNIVERSITY OF LOUISIANA.

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DE BOW'S REVIEW.

JULY, 1855.

LITERARY AND MISCELLANEOUS JOURNAL

DEVELOPMENT OF SOUTHERN INDUSTRY.

The South Carolina Institute for the Promotion of Agriculture, the Mechanic Arts, and Manufactures, has been in existence for several years. It has conferred advantages which have been felt not only in South Carolina, but in all the neighboring States. The Institute has lately constructed a most magnificent hall in Charleston, and opened it with a fair, rivalling in the extent and beauty of its fabrics any which has been previously held in the South. It is our intention to review in detail the list of contributions and awards of premiums, as we shall in regard to the fairs of other southern States. Space at this time will only admit of the opening address of the Hon. James L. Orr, which is marked with great ability, and will be read with interest by every class of our subscribers.

This is an occasion of lively interest to the city of Charleston, as well as to the State of South Carolina. The commodious building we occupy has been erected by their united liberality, and is now dedicated to developing the mechanic arts and the agricultural industry of South Carolina. Its giant timbers groan beneath the weight of their combined productions, brought and exhibited here as tangible proofs of superior skill in their varied departments, to contest the prizes offered by your liberality, and to stimulate still higher perfection in useful and ingenious labor. The mechanic is here, the artisan is here, the manufacturer is here, and here is the farmer and planter, and here, too, are the fair daughters of Carolina, the noble matron, and the blooming damsel, all are here to tender you their offerings of industry, of skill, of artistic taste. Their contributions not only charm the eye, but gladden the heart of all who feel a proper solicitude in the progress and permanent prosperity of our much cherished commonwealth.

The founders of this Institute have achieved a triumph which concedes their sagacity and public spirit, and may

justly congratulate themselves on the eminent success of their praiseworthy experiment, when they see around, arranged in faultless order, the various works, fabrics, and inventions, for supplying man's wants, and ministering to his comforts.

A new era has dawned on the productive energies and capabilities of South Carolina, and, through the determined enterprise of her patriotic citizens, she will go hand in hand with the foremost in this progressive advance in national development. May the sun of her prosperity never set.

Agricultural fairs, for a long while, have been no novelties in this country or in Europe, and the quality and quantity of its productions have doubtless been sensibly augmented by the knowledge imparted and the spirit of rivalry awakened among agriculturists. Within the last thirty years, however, the initiative has been taken in the United States of encouraging the mechanic arts by the organization of mechanic institutes, and adding to the exhibition and comparison of mechanic labor, lectures on such practical and scientific subjects as educated the artisan and mechanic in his profession. Wherever the policy has been adopted, the results have been most gratifying in the social elevation and enlightenment of this numerous and useful class of society, and we may confidently assume that Charleston and the State will be most bounteously rewarded for their patronage of this Institute in the professional, social, and intellectual elevation of the mechanic and the citizen in general.

Great Britain, at the World's Fair in London, has not only eclipsed all former exhibitions, but through her patronage of that fair has accomplished more in stimulating mechanical skill—in giving greater impetus to the inventive genius of her subjects, and in imparting thought and knowledge in the arts and agriculture, than all the acts of her parliament for half a century.

Her example was followed by this country, but with results far less satisfactory. And yet the Crystal Palace at New York has accomplished good. The paintings, statuary, and machinery, were visited by thousands; they were observed, studied, criticised, and many useful ideas were impressed on the elastic minds of our countrymen, which may in future be fully developed to the permanent advantage of this great country.

An imposing exhibition, after the London model, is projected for this year at Paris, under the immediate patronage of the emperor. It is not merely the pageant that prompts him. He has the sagacity to avail himself of the occasion, to spread out before his subjects their own productions of ar-

tistic and mechanical skill, and the finest specimens and models of ingenious workmanship in all countries of the civilized world. Will not the generous rivalry incited, and the information attained by his subjects, amply reimburse the small national outlay for its construction and inauguration?

Such facts prove the deep interest taken by these three principal nations in fostering and promoting every variety of mechanical industry, and nearly all the governments of society, as well as these, have manifested a like solicitude by conferring franchises on inventors, allowing them the exclusive use and monopoly of new inventions, by letters patent, for a series of years. Nor can their solicitude awaken surprise, when we consider the vast amount of labor employed, other than agricultural, in supplying the natural and acquired wants of the human family.

Dr. Ure, in his invaluable Dictionary of Arts, Manufactures, and Mines, defines operative industry to be "to produce, transform, and distribute all such material objects as are suited to satisfy the wants of mankind. The primary *production* of these objects is assigned to the husbandman, the fisherman, and the miner; their *transformation* to the manufacturer and artisan; and their *distribution* to the engineer, shipwright, and sailor." Mechanical labor enters into mining, and is eminently useful to the husbandman and fisherman in production; its transformation employs exclusively that species of labor; and its distribution, except the muscles and sinews of the sailor, and the winds of heaven, is likewise accomplished by the same labor. How important, then, is it to man that such an aggregation of necessary labor by one class should be directed by education, facilitated by science, stimulated by exciting generous emulation among its members, fostered by wise legislation, and patronized and encouraged by the sympathy and kind offices of the good citizen?

No service more acceptable to the State of South Carolina could have been rendered by her most sagacious and patriotic citizen than the organization of this Institute, the object of which is to develop a species of labor greatly needed throughout her limits. The meagre supply of mechanical industry is a serious impediment to our prosperity. We should possess it in such abundance as to have every want supplied in that department by mechanics residing among us, unless from some natural or adventitious cause it can be more cheaply produced elsewhere—and this distribution of labor is as necessary to advance agriculture as other branches of industry.

Do we now possess it? Who can answer affirmatively? In 1850, the artisans and mechanics numbered 9,993, whilst all other occupations amounted to 58,556, showing that less than one-fifth of our white population are engaged in this extensive branch of industry; and if the labor of our slaves be taken into the estimate, it may safely be assumed that less than one-fifteenth of all the labor in this State is thus employed. In New York, the artisans and mechanics number 252,747, and all other occupations 635,933, giving nearly one-third of her population to the mechanic arts—and let it be borne in mind that New York is a great *agricultural* State. In Maryland there are 38,010 artists and mechanics, and all other employments number only 86,866, showing that one-third of her entire white population are pursuing the mechanic arts. There is another comparison which the late census suggests. Maryland's population is 583,034, whilst that of South Carolina is 668,507. The improved lands in Maryland are 2,797,905 acres, in South Carolina 4,072,651 acres; the unimproved lands in Maryland are 1,836,445 acres, and in South Carolina 12,145,049 acres; and yet the remarkable fact is exhibited that the cash valuation of the improved lands in Maryland is greater than in South Carolina, although the quantity is less by nearly one-half. The valuation in the former is \$87,178,545, and in the latter \$86,568,038. This indicates a high state of agricultural prosperity in Maryland, which may well be emulated. What is in the soil or agricultural productions there so superior to South Carolina? There is a more judicious distribution of labor there, and her large city, Baltimore, has appreciated the value of lands by furnishing a ready cash market for agricultural products grown on them. It is the labor and enterprise of Baltimore mechanics that has swelled her area and wealth in a few years from a small town to a majestic city.

In 1790 the population of Baltimore was 13,503, and Charleston 16,359; in 1850 Baltimore had grown to 169,054, and Charleston to 42,985. At the period when this comparison commences the exports of Charleston were varied and valuable; the commerce she enjoyed more enriching; the interior country supporting her more fertile and extensive; her geographical position more favorable by reason of freedom from the competition of other cities; in all these respects Charleston had the advantage of Baltimore. Now their situations have changed, and Baltimore quadruples the population of our favorite city, and her commerce, tonnage, and prosperity have gone on increasing in the same wondrous manner as her population.

Why is it so? Let a stranger visit the two cities and he will assign you the reasons. He will first tell you that no great city can be built up simply by exporting great staples; she must give employment to other labor and pursuits than to commission merchants. She must have her artisans and mechanics. He will see in Baltimore extensive ship yards enclosing her harbor, hundreds of ship carpenters actively employed in constructing new boats and vessels, and in repairing old and crazy hulks, and perhaps whilst admiring the active industry of the scene around, he will discover a vessel sailing into port with ship lumber from Charleston. Baltimore ship carpenters are to realize all the profits arising from working the lumber. If a Charleston merchant desires to purchase a vessel for the foreign or coasting trade, he sends to Baltimore and pays the \$50,000 demanded for it, when his own city has received for every stick of timber in it but \$10,000. To whose support and gain does the difference of \$40,000 go? How many ship carpenters would be employed a whole year on such a sum? What activity would be infused in every branch of business in your city if twenty such vessels were annually constructed in your own harbor? What would be the increased sales and profits of your retail traders, your grocers, your innkeepers, and provision dealers?

Why not do your own ship-building by your own carpenters? There is no natural barrier in your way. The season of your epidemic disease, should it return unfortunately every year, is shorter than the rigors of an inhospitable winter at Kittery, Portland, Boston, or New York, when labor is almost entirely suspended by their workmen. The lumber they use is taken from your wharves. Why not put the labor on it before committing it to the strifes of ocean, and build up and enrich your own mechanics? The stranger will see in Baltimore thousands of mechanics at their forges, furnaces, and foundries, in their shot towers, marble and stone yards, shops, and machine shops. Nearly every square supports its tall chimney with the black smoke issuing from the furnace of an engine driving machinery at its base. How many smoke stacks would the stranger count in Charleston? How many engines, propelling machinery, would he be able to enumerate? Was not the steam engine some years back a *mala prohibita* within the corporate limits of this city? How many carpenters at your ship yards, mechanics at your forges and foundries, and machinists at your work shops would he count? These hints furnish some of the prominent reasons why Baltimore has outstripped Charleston, and indi-

cate means of speedily and permanently promoting her languishing prosperity.

The demand for engines and locomotives is now imposing, and annually augmenting throughout the State. Engines are being extensively introduced for saw, merchant, and grist mills, as well as for various descriptions of machines to save or facilitate labor. Eight hundred miles and more of railroads traverse the State, and the locomotives used cost the companies not less annually than \$150,000. Have you machinists enough in Charleston to execute supplies for the demand from all these sources? If you have not, strive to obtain them. How vivifying and refreshing to every industrial interest if the \$250,000, annually expended abroad for engines and locomotives, could be retained at home to pay home mechanics?

It is unnecessary that I should point out other branches of mechanical industry, the examples given establish your greatest want; and until artisans and mechanics crowd your city, I fear that your hopes of a greatly enhanced prosperity are illusory.

In many localities in the country the deficiency in the mechanic arts is even greater than here, and with a less sufficient excuse for the delinquency. Town and village property, taxes, rents, and provisions are lower than in the city, and the climate is beautiful and salubrious—exempt from all malignant epidemic maladies—and yet some of our villages can boast of no higher attainment in the mechanic arts than the possession of a blacksmith who can shoe a horse and lay a plough, or a house-carpenter who can jack plank and saw lumber; and what is the result? In traversing the country we too often see huge piles of lumber thrown together without regard to convenience or comfort in light or ventilation; without symmetry and without consulting a single point of architectural taste or beauty, and the expense incurred by the builder equal to its construction and completion with neatness and even elegance. Unless some improvement is made in rural architecture, another order will be added to the existing list, which a synic might denominate the "Carolina," as descriptive of the locality of its origin. The dwelling places of the dead manifest the same absence of taste, care, and attention as those of the living. A church-yard is generally selected as the depository of the remains of the deceased. It is enclosed and is shrubbed out until the plat is covered over with graves; then commences an unpitiful neglect—the paling decays and tumbles to the ground—the

briars and brambles spring up and become a covert for the hare, the fox, and the serpent! No stone rises to mark the spot where a loved one reposes. In private burial grounds the picture is even more revolting. The homestead passes into the hands of thoughtless, and, perhaps, heartless strangers; the enclosure falls, and time and season level the little mound. Soon it is forgotten that the dead sleep there; and over the bones of the once owner of the mansion, groves and broad fields around, cotton and corn grows. Oh! what desecration of the dead. The aboriginal savage marked by more enduring monuments the resting places of their loved dead. They heaped earth and stone together so high that ages did not efface the memorial, and all future generations trod lightly over the spot where the venerated sleeper reposed. Every town and village should have its cemetery—enclosed with substantial iron railing—laid out in plats and walks, and planted in flowers and evergreens, and some neat, simple monument be erected over every grave. This would be showing that respect and affection for the memory of the dead due by a civilized and christian people.

We must have architects and educated mechanics to improve the style of our buildings, and iron founders, marble yards, and stone-cutters to beautify and ornament the dwelling places of the dead.

The State is in want of additional manufactories, and I use the word in its comprehensive sense, to work by machinery, into forms convenient for use, all kinds of raw materials. Columbia is admirably located for a great manufacturing town. Water, the cheapest of all motors yet discovered, is furnished in the greatest abundance near the city, over the shoaly beds of the broad Saluda and Congaree rivers. An unlimited amount of machinery could be propelled, and a great variety of work and fabrics produced. It is easy of access by the railroad converging within its limits, and is placed, thereby, within a few hours of every description of raw material furnished by the State. Nearly all the upper districts are likewise prodigally supplied with water power. The streams have their sources in the mountains, and are fed by bold unfailing springs, yielding in their channels a uniform regular current, exposed neither to congelation in the winter nor to evaporation or absorption in the summer. This secures us a striking and important natural advantage over the northern and eastern States, for the severity of their winters freeze the streams and ice-bind their wheels so as to suspend for several months the working of all machinery driven by water, and, as a consequence, curtails profit by

suspending all labor depending upon such agency, to the detriment of the stockholder. Our operations may be continued the year through without any such interruption or drawback on the profits of the investment. The extraordinary low price at which water power may be purchased, being really little beyond the intrinsic value of the land usually annexed to it, should induce enterprise and capital to cover the base of every shoal in South Carolina with machinery for the extensive and economical manufacture of all useful fabrics and implements. If this picture could be converted into a reality, how many happy light-hearted mechanics, artisans, and machinist would find employment, and what new prosperity would be diffused within our borders? The answer may be found by estimating how much of our wealth—hard-earned wealth from the laborious tillage of cotton and rice in a soil once rich but now gradually impoverishing—is annually expended in remote sections for the commonest implements and utensils. Whence comes your axes, hoes, scythes, reapers, chains—yes, even your ploughs, harrows, rakes, axe and auger handles? Your linsey, brogans, blankets, and much of your domestics? Your furniture, carpets, calicos, and muslins? The cradle that rocks your infant to sweet slumbers—the top your boy spins—the doll your little girl caresses—the clothes your children wear—the books from which they are educated—the carriage you ride in, and the guns and fishing tackle you sport with, are all imported into South Carolina, and the products of the soil are borne away to pay for them. In despite of all this the State has prospered, but how much more exalted would have been her progress and improvement if her wants had been supplied at home by the labor of her own citizens? Growing towns and smiling villages would greet the eye. No gullied fields or dilapidated mansions would tell that agriculture languished, if we had wisely diversified labor. Can a policy so obviously at war with every precept of political economy, and so fatal to every principle of social progress, be longer persisted in? There is no natural obstacle to supplying ourselves with every article I have enumerated by properly directed labor in our own State. We have genius, education, industry, and the material; and if our citizens would estimate the advantages to flow from a changed policy soon, we would have capital seeking investment in practical manufacturing schemes. None others should be encouraged. I would not urge my fellow-citizens to establish an embargo on all foreign industry—to refuse to purchase abroad such articles and materials for use and pleasure as from soil.

climate, cheap labor, great skill, large experience, or other cause, could be obtained at a less cost than they could be matured at within our own limits. I would not controvert the sound political and social axiom "to buy in the cheapest and sell in the dearest markets." But I am for stimulating enterprise so as to make it our interest to buy at home, when there is no natural impediment in making the home market as good as any other. It inspires a sense of independence, and brings freighted in its train wealth, happiness, and contentment.

Some of the deficiencies of long duration are now being repaired by the active energy and enterprise of our citizens. Cotton manufactories are springing up, and stockholders who have secured prudent supervision of their establishments are now, and have for some years past, been realizing a greater per cent. on the capital invested than has been yielded by investments in agriculture. Experience and the enlarged skill it brings will certainly ensure even large dividends in the future. This branch of manufacture should be extended until the markets of the whole world are supplied with cotton and yarn and coarse fabrics, produced in the manufactories of the southern States. We are wanting in no single natural advantage to compete successfully with every rival. The cheap motor, a healthful, salubrious climate, mild and equable temperature, cheap building materials, an abundance of provisions and the raw material grown on the spot, are natural advantages we enjoy. What section of the earth combines such an extent and variety of advantages for the manufacture of cotton?

The transportation to market of the raw material is just as expensive as an equal amount of the manufactured fabric, but the pound of the latter brings into the country three times the amount of cash brought in by the former. Why may we not embark extensively in this branch of industry, with the positive assurance of our ability to undersell all competitors in these articles in every market?

Our experiments in manufacturing have crowned the hopes of their authors with gratifying success, and have illustrated genius and capacity of a high order in our mechanics. Paper-mills in various localities have been erected, and their fabrics reflect credit upon the operatives, and establish the triumph of the experiment. Much of the letter and cap paper used in the State, and most of the paper for the newspaper press in this and other southern States, is manufactured in South Carolina mills, and at a fairly remunerating profit to owners and stockholders.

The machine shops in Charleston are growing in popular favor. The finely finished machinery, such as engines and locomotives, turned out of the shops is the highest recommendation to the skill of your workmen, it is their best advertisement, they require no other eulogist of their merit, and the day is not far distant, I trust, when the last engine and locomotive shall be landed on a Charleston wharf, the necessities of the State being supplied by our own enterprising and industrious mechanics.

Your foundries here and in the interior are beginning to compete with older establishments in other States. Let them make a character by the elegance and durability of their works, increase their force and capital, press the enterprise with becoming energy, and they will be munificently appreciated by a discriminating public.

There is one branch of mechanical manufactures which, from its rapid advance and high perfection, is entitled to the special laudation of every friend of improvement. Thousands of dollars annually expended a few years back in New Jersey, New York, and Connecticut, for carriages and other wheeled vehicles, are now expended in our midst to pay domestic mechanics for the same work executed in their shops. Many of the towns in the State can bear testimony to the streams of prosperity turned in upon them by the establishment of such manufactories in their midst. If you doubt the skill of the mechanics engaged in this branch, look at the specimens on exhibition here. Will they suffer in a comparison with any model vehicles from any foreign shop in the elegance of finish, skill and fidelity in construction, durability of material, symmetry of model, or economy of cost? May I not go further, and challenge any foreign shop to produce a specimen equal to some now on exhibition here?

The multiplication of carriage manufactories in the State has not only diffused life and activity into many other departments of industry, but it has put wealth into the pockets of the proprietors, and has added to the comforts and pleasures of the people.

Twenty-five years ago, in the country where I reside, it was a rare sound to hear the rattling of carriage wheels at a country church. Occasionally, when a farmer had grown a little ambitious of display in making a "turn-out," or when his children were too numerous to be conveyed even by doubling on poor Dobbin's back, an old gig or a Jersey wagon was called into requisition, which always brought from his neighbors a critique on his pride or extravagance. That has passed away, and now the church-yard is crowded with

vehicles purchased by the owner from the manufacturer, and paid for by timber from his forest or surplus products from his farm. Both are benefited by the exchange, and society is elevated and refined by extending the personal comforts and exalting the tastes and aspirations of its members.

The extensive carriage manufactory at Greenville employs some fifty mechanics, and sells annually not less than seventy-five thousand dollars worth of work. The market which it furnishes to the various branches of industry in the district in its consumption of lumber, materials, provisions, &c., diffuses a prosperity in the district greater than is done by all the capital expended by our friends from the middle and lower districts in their summer excursions and residence in this beautiful mountain town. A dozen such manufactories, employed in making other articles of prime necessity now purchased abroad, would make every hill and every valley blossom with plenty, and every heart swell in happy content.

There are other branches of manufacturing industry meriting special commendation, which I must omit for want of time. Something has been done; but much, very much, remains to be consummated before that bountiful prosperity hovers over us, which it is our duty to woo and win to our embrace.

We want manufactories and machine shops—they co-exist together. We want enterprising, intelligent, inventive mechanics. We want them to increase until their labor will furnish us every machine and fabric for man's use that can be as cheaply matured here as elsewhere. How are these wants to be supplied? Let our citizens cease to expatriate themselves from the bosom and kind affections of our common mother, and devote themselves to the grateful task of fostering and warming the condition in which she now languishes. Let them not deceive themselves by the delusive hopes of sudden wealth in new and distant lands, and let them resolve that when "life's fitful fever" is over, that their bones shall repose side by side with their fathers beneath the native soil. Take it all in all, we have the best country which I have seen in the broad expanse of this great confederacy—let us be contented to occupy, and improve, and develop it. Providence has blessed us with every variety of soil and surface, climate, production, and resources with no stinted hand—let us do something worthy of the magnificence we enjoy, and bequeath to our children a heritage and country greater than we received from our fathers.

The first great step to be taken in the reformation of our habits, to re-invigorate our decaying prosperity, and to de-

velope our exhaustless resources, is for our planters and farmers to invest the whole of the nett profits on agricultural capital in some species of manufacturing; the field is broad and inviting, and but little has yet been occupied. With prudence and energy there can be no failure in any branch. A short experience will demonstrate that the investment is more profitable than it would be in agriculture, and it must continue so until the distribution of labor and capital, in all branches of industry, equalizes profits. It will be many years before the demands of labor and capital in manufactures will be met; and until that period arrives, manufacturing products must be predominant. Such investments must be made with bold confidence, and pressed with vigilant energy, to reimburse in the adventure. The absence of all experience in this department of industry has resulted in miscarriages in some sanguine experiments already made, and they are held up as beacons by the croakers to warn all others from venturing; but it will be found, on strict scrutiny, that miscarriages have been more common in agricultural investments that have been made and supervised by inactive and inexperienced men than in manufacturing enterprises.

Our planters and farmers are even too timid when invited to make outlays of capital in anything new; and yet they carry their liberality even to prodigality in satisfying their own or the wants of friends. They spend their money in generous profusion to minister to their own or the personal comforts of those dependent on or attached to them, whether the attachment originates in consanguinity or friendship; but when they invest money it must be with a certainty that it will yield seven per cent. per annum. This timidity is a barrier to enterprise, and some useful lessons might be learned by them from our northern rivals. In some particulars the population of the north and east is misjudged in the south. They are a people full of enterprise, energy, industry, thrift, and economy. In personal expenditures their economy is so rigid that we often denominate it parsimony, and their chaffering over small sums implies a total absence of liberality. Their rule of life is to expend the smallest possible amount in purchasing ordinary comforts or pleasure—for when thus expended it is so much capital forever gone—and to invest their surplus gains in any and every conceivable scheme promising directly or remotely to bring profit or interest. Their enterprise and adventure is so great that no new *project* is too chimerical to secure for experiment an investment of northern capital. Hence you see the streams of New England and some of the middle States lined with

machinery. Their railroads surmount every hill and penetrate every valley. Their other public works, and all their public buildings, manifest the same indomitable enterprise and a spirit of adventure that hazards capital in every scheme. Their whole country, in all its length and breadth, is a monument to their industry and public spirit. They are shrewd in driving a bargain—so much so as to expose them to the imputation of disingenuousness. In their conduct they recognise the morality, and put into practice in trade, the old common-law doctrine of contracts, *caveat emptor*. Their public charitable institutions are high tributes to their benevolence. They husband dimes to invest or donate dollars. The inventive genius of her sons is fostered and rewarded by their willingness to try every novelty, and if it proves useful, ample compensation is reaped by the inventor for the new thought. Their investments oftentimes are profitless; and yet it seems to be no discouragement, it rather incites to other schemes promising reimbursement for past losses, and great gains from present risks. We transfer our surplus capital to distant States to grow more cotton and sugar, or, if it be retained here, it is represented by bonds and notes bearing seven per cent. interest. This was the habit of our fathers, and any innovation upon long established usage or theory is resisted—hence reforms of old habits prove a great labor to the reformer. It is time that it should commence. Individual and State interests require us to take a “new latitude and departure.” The market for agricultural labor stagnates under a superabundant supply—the market for agricultural capital is satiated; and there is active demand for manufacturing labor and capital, a wise political economy teaches the necessity of their equalization.

When our citizens shall have embarked their capital in manufactures and machinery our State will rapidly fill up with artisans and mechanics, without whose presence and labor, I believe, no interest, even agricultural, can reach the maximum prosperity to which it is capable of ascending.

The idea was once prevalent with wrong-headed people that manual and mechanical labor was inconsistent with intelligence, gentility, and dignity of character. Most happily such an absurd sentiment is exploded in the minds of all sensible men and women. Labor is the tax upon all animated existence for its preservation. The ant, the reptile, the beasts of the field and the fowls of the air, all toil for food. Man, the master of them all, endowed with intellect, and created with appetites and desires to exercise and develop his capacious faculties, is bound also to labor, and to labor by

the omnipotent fiat of Jehovah. When our common progenitor was expelled from the green bowers of Eden, it was under an angered though just sentence that "in the sweat of thy face shalt thou eat bread till thou return unto the ground." Henceforward the spontaneous productions of the earth failed to sustain man. Can labor be disreputable since its requirements are universal and its necessities of Divine origin?

The progress of civilization is constantly multiplying and expanding the demands upon labor, and the judicious means for increasing its products have engaged the thought and employed the invention of the wisest and best men in every age. Men are entitled to that respect and consideration from the community which their moral worth, intelligence, and usefulness justly inspire, without regard to the occupation pursued. The lawyer and physician labor, and oftentimes the fœtid air of a dark dungeon, or the nauseating odor of a sick room is more repugnant to the senses and sensibilities than any which the forge or machine shop emits. The educated youth who masters one or more branches of the mechanic arts, by study and application, has a personal independence and a prospect for the future, to be envied by the brother who has chosen a learned profession. That is an erroneous public opinion which gives to professional men rank and position of social and intellectual superiority over other occupations. The exclusive business of professional men is intellectual, and if they evince superior attainment within the line of their employment it is no more than they should accomplish. But to test the amount of intellect required in different occupations, which would require the most comprehensive understanding, the machinist who could construct a steam engine and adjust all its nice parts and apply its power to spinning and weaving, or the lawyer who could comprehend the rule in Shelley's case and expound the statute *de bonis*?

Ambitious fathers dedicate their sons to the learned professions, and many thus sent fall far below the fond anticipations of doating parents. They locate in a town or village, and hang their sign upon the "outer wall." Weeks and months roll on, and no patients or clients come; habits of idleness are contracted, and, with them, pleasure in dissipation, which soon ends in debauchery; then loss of self-respect—loss of hope—that last prop of the falling man—despair and ruin, crime and disgrace perhaps, till the sad *finale* is at length reached, when he sinks

"To the low dust from whence he sprung,
Unwept, unhonored, and unsung!"

The educated, skilful mechanic is always employed; he

receives and husbands fairly remunerating wages for his labor; he finds in his profession an ample theatre for the exercise of taste, invention, judgment, and every faculty of the proudest intellect; he crowns his house with comfort and his table with abundance. Is his domestic happiness and his usefulness to society to be compared with that of the briefless lawyer or the patientless doctor?

Young men in our State are commencing to realize that labor is reputable. When the graduates of a respectable institution sacrifice false sentiment and go to the machine shop to be educated in mechanism and enginery, as some have recently done, it furnishes the index of a healthful public opinion, and gives bright prospects of an increasing prosperity in the future.

The great desideratum now is to give dignity to mechanical employment by educating its members, not only in the use of tools and machines, but in physical science; teach them chemistry, mechanical philosophy, mathematics, engineering, architecture, and all knowledge necessary to prosecute all branches of their profession. This accomplished, we shall hear no more of their social and intellectual inferiority. There can be no inherent defects in any of the elements constituting the man where his labors show such varied useful triumphs as mark the pathway of the mechanic in ministering to the conveniences and comforts of civilized life. Their social influence has not been equal to their numbers or services in advancing the civilization of the race. Mechanics, now is the time to commence a reformation; push it on with your wonted energy; organize associations, not to regulate wages, but to buy libraries—to procure lecturers who may instruct you—to interchange thoughts during hours of leisure, and soon your influence will be as potent in the social and intellectual as it now is in the industrial and inventive world.

Distinction is the pet of no *one* occupation; every useful path in life is an avenue to power, and opens doors of conquest to him who has the moral courage to knock and enter. It has been nobly won by many of your brethren. Franklin, Watt, Fulton, Arkwright, Cartwright, Adams, Morse, and thousands more, have blessed mankind by their inventive genius, and given a bright page in history to their own great names. A gifted orator sums up your duties and responsibilities in the following beautiful language: "Respect your calling; respect yourselves. The cause of human improvement has no firmer or more powerful friends. In the great temple of nature, whose foundation is the earth, whose pil-

lars are the eternal hills, whose roof is the star-lit sky, whose organ tones are the whispering breezes and the sounding storm, whose architect is God, there is no ministry more sacred than that of the intelligent mechanic." With your genius and capacity, industry and usefulness, why may you not stand up and exact recognition of your perfect equality with the most favored and exalted class of your fellow men.

If the State cherished in its bosom intelligent mechanics in numbers, equal to supplying all our necessities, as I have presented them, new fountains of wealth would be poured out on every industrial interest. The population of our cities would rapidly increase, old towns would be rejuvenated, and new ones builded; the merchant's sales and customers would be extended, real estate appreciated in value, agriculture would no longer languish; it is no idle dream, the horn of plenty would be emptied on the land, and its refreshing dews would quicken and eliven its hills and vales, mountains and plains. Let us all unite cordially in fostering a profession which will beautify the country, enrich the citizen, develop the resources and magnify the greatness of our much loved and cherished Carolina.

The patronage of this institute is not restricted to manufactures and the mechanic arts, but wisely embraces in its purposes the promotion of agriculture, which now is and must continue the paramount industrial interest of South Carolina. It is the basis of all wealth. Its products, beyond the consumption of the laborer, becomes capital, a portion of which is expended in meeting the incidental outlays of production, and the remainder is the annual accumulated wealth of the husbandman.

I have, however, consumed already too much of your time to do more than glance at a few points in this great interest.

In proportion as it was developed in conjunction with manufactures and the mechanic arts in the empires and republics of antiquity, so was their power and influence felt and exerted on surrounding nations. The most celebrated of these empires had a feature in their systems of civilization precisely the same as exists in the southern States of this confederation, to wit: domestic slavery.

Egypt was celebrated for her agricultural productions; a sufficiency to supply home consumption and a surplus with which to emply a foreign commerce. Her progress in the mechanic arts would do no discredit to our epoch. Dr. Wilde, in his voyage to the Mediterranean, gives an interesting account of the open linen work found covering the mummies of Egypt as similar to modern Berlin worsted. "One

pattern," he says, "represented roses with four petals, shaped like hearts arranged in lozenges, composed of buds of different colors, which cross the linen obliquely, and thus present the appearance of an embroidered net of many colors; three varieties of red, two blue, a white and a yellow. The linen ground dyed a nankeen color." This description almost rivals some of the beautiful specimens on exhibition here from the work tables of our own fair countrywomen. Egypt had her coins, gold chains, signet rings, coverings of tapestry, carved work, and glass-ware. Her jurisprudence, skill in the medical art, and in embalming the dead, are imperishable memorials of her learning, science, and advanced civilization. Her system of domestic slavery was not unlike our own—her slaves tilled the soil and performed menial services—they were bought and sold for a price in market overt. For centuries the empire flourished, and her power was recognized by the neighboring kingdoms.

Babylonia, an empire great and powerful among her contemporaries, with fruitful agriculture, flourished for a succession of ages. She too had her system of domestic slavery.

Phœnicia rose rapidly in power and wealth, extended her dominions by planting colonies, tilled the soil with slaves, and carried on an extensive commerce. Tyre and Sidon, her principal cities, were the very cradles of the mechanic arts, and were, it seems, the birth-place of arithmetic, astronomy, and a taste for letters, which afterwards grew up into such magnitude, when transplanted into Greece. Phœnicia, too, had her system of domestic slavery.

Carthage was a rich and powerful republic, engaged extensively in commerce and devoted to conquest. Her agriculture was restricted, and much of her supplies imported from Palestine. Her slaves tilled the earth and performed menial service for their master. Free Carthage, too, had her system of domestic slavery.

Greece, the land of Plato, and Socrates, and Demosthenes—the land of philosophy, poetry, and eloquence, around whose memory crowd so many classical associations—even free Greece was the home of slavery. A well-informed writer describes ancient Greece as "sufficiently fertile to reward toil; it was not so prolific as to support idleness. Varied in its character, it did not stimulate its inhabitants to one branch of industry alone, it invited the culture of all. One district was best suited to produce wine, another oil, and a third corn. Arcadia supplied pasturage for cattle; Thessaly was proud of its horses; the coast, indented with numerous bays and harbors, afforded every facility to navigation and commerce.

Greece was not exclusively agricultural, pastoral, or commercial, but she was all three together." In the meridian splendor of her power, greatness, and glory, with a refined civilization, which has excited the wonder and challenged the admiration of the world, she, too, had her system of domestic slavery.

The Romans, like ourselves, were a mixed race, which impressed on them a peculiar nationality. The power and resources of the empire were colossal in all their proportions. In the days of her might, her arts, her agriculture, her manufactures, her arms, her genius, philosophy, and eloquence, towered high above all rivals. She was, indeed, the "mistress of the world," and her name spread dismay in the countries of her enemies. In the pride and pomp of her power, she, too, had her system of domestic slavery, and her slaves outnumbered the free citizens of Rome.

In all these empires their slaves most generally were vanquished enemies. There was no distinction in color, features, and understanding between the master and slave, which exposed the institution to embarrassment, such as we are exempt from in the United States, Cuba, and Brazil. To control ancient slaves required more restraint, and, of consequence, a more vigorous discipline than we practice towards our slaves. The African slave has his *status* stamped by the Creator in indelible colors, he needs no badge or uniform to assign him his place when seen. The inferiority of his intellect is not less distinctly marked, he is dull and inapt in his perceptions, indolent in thought, sluggish in his movements, improvident in his habits, and feeble in his reasoning; and this inferiority, appreciated by himself, induces a prompt and cheerful submission to the authority of the master, with but little necessity to appeal to restraint or punishment. This makes the relation in modern times more acceptable to the slave, and less perplexing to the master.

I have collated this brief epitome of the history of some of the most celebrated empires and republics of antiquity, and noted specially their system of slavery, to prove from the record of history that the modern opinion held by many persons in the north and east that slavery is a political evil, by reason of the weakness, in a military aspect, entailed on the State, and that it is incompatible with the personal and mental development of the white man, is founded in the most palpable error. I need only point to this epitome to establish the fact that slavery presents no barrier whatever to the highest development and civilization of the master race. What would an old Roman have replied to the charge that slavery was an

element of weakness? He would have said that while Roman citizens were fighting the battles of the republic, Roman slaves were tilling the soil to support her armies and people; or if at peace, that the slave labored to give the owner leisure and means to cultivate philosophy, poetry, letters, and eloquence. With all her prating of philanthropy, has England, now an old empire, in her poetry obscured the genius of Virgil and Horace, or in her oratory eclipsed the splendid eloquence of Cicero? All the ancient precedents establish the fact, that slaveholding States are not only capable, but that they actually do attain the most exalted civilization enjoyed by their most favored and accomplished cotemporaries. Does our experience confirm the truth of these precedents? We have in the south more wealth *per capita* than the population of the north possess; we have as much virtue and as little crime; we, with a third less population, furnish more than a moiety of all the exports; and when our sons have met their's in the camp, in the cabinet, in the senate, or on the bench, have they not nobly maintained themselves, and borne to their countrymen as many trophies from all these theatres as the men of the north?

We have only to improve the means which the God of nature has showered in copious profusion all over this State to make our population affluent, independent, refined, intelligent, prosperous, and powerful.

In late years, new interest has been awakened in improving our agriculture. It is fortunate that apathy has at last been discarded, and that our planters have commenced to repair the breaches of former years. Our lands are growing old, cleared hills have been pierced with deep gullies, and many exhausted fields surrendered to the sedge and pine; and still there is no sensible diminution in production, and yet but for the improvement of husbandry in modern years our agriculture would have sadly languished. Something has been done, but much remains for the planter to do.

In former years, the strength of a rich virgin soil supplied, to some extent, the failure of good seasons and careful culture; but now, that soil is washed off, or has tired in the constant drafts on its strength. We must practice liberality to the earth, our most generous benefactress. If she had grown surly, and yielded to our labor in proportion to the alimment we have bestowed her, how many long years ago would we have been pinched with want and stricken with famine? She has, in the generosity of her nature, disdained to retaliate our parsimony, but, with a noble benevolence, has tasked her utmost energies to fill our granaries and

enrich our coffers. How can we, guided by the impulses of grateful hearts, longer neglect to minister to the wants of this disinterested friend who so steadfastly toils for our happiness? Nourish her with the food her appetite craves and she will reimburse you with no stinted interest. When she has grown weary, enfeebled by long and faithful service, let her rest. She will soon acquire new strength and vigor, and bear you on her generous bosom a teeming harvest. The enlightened donor is never forgotten when she scatters her bounties. Try it.

The pecuniary and personal comfort of the parties would be greatly promoted if the planters of this State were all transformed into farmers. That policy is most pernicious which prompts the planter to swell the number of his cotton bales, and sends him into the provision market to buy his provisions, and into the live stock market to buy the animals used and consumed on the plantation. It makes him merely the supervisor of cotton fields, to produce profits for the stock and provision dealers; for how little of the roll of cotton money is left to the planter when he has paid his merchant, his grocer, and the stock drover.

How much more to his interest, then, to produce all the articles of consumption which may be grown in his own climate and on his own soil? The provisions consumed in this State may be successfully grown in every district, and the first great care of the planter should be to raise his own breadstuffs, pork, beef, and mutton, and with equal care he should rear his own horses and mules for plantation use. System and personal supervision will render the task one of easy accomplishment, and it will be an immense saving of the money drain for plantation expenses. His cattle will furnish him milk and butter, and his flocks of sheep with mutton, as well as the fleece to clothe his workers. This policy would require a reduction in the number of acres planted in cotton, but if the policy could become uniform throughout the planting States, the reduction would entail no loss, the reduced crop yielding as large an aggregate as is now brought by full crops, but if loss should follow, it will be more than reimbursed in the falling off of plantation expenses.

The system, order, personal supervision, and care for small matters, which this change would initiate, will beget economy—a personal virtue which our planters do not, in an eminent degree, possess. The cultivation of a great staple, which can be readily converted into cash, disinclines the planter to look after the details of minor interests, which

being neglected, must be supplied by contributions levied on the staple crop. This being true, whilst the market value of the labor, producing only a great staple, is greater than the same amount employed in farming, the farmer amasses wealth more rapidly than the planter; and for this reason, in thirty years, the States of Kentucky and Tennessee—farming States—will be the wealthiest in the Union, not excepting Mississippi or Louisiana.

They send their surplus products to the south, growing staples and receive the cash. A portion of it is expended by them with the foreign and eastern merchant and manufacturer, the balance, which is by no means inconsiderable, remains with them, and is invested in public improvements, in building and decorating mansions, and in multiplying personal comforts. What disposition is made of the proceeds of the staple crop by the planter? The foreign and eastern merchant and manufacturer receives, in any event, as large a sum as the Kentuckian expends, but the planter's outlay does not stop there. All the pork and bacon, and much of the beef to support his workers for the year, must be bought and paid for, and not unfrequently the corn and flour aids in swelling the bill. His horses and mules are worn out or have died during the year, and their number is to be replenished for the next crop. How much of the proceeds of the staple crop remain to be invested in public improvements and personal comforts after this depleting, eastward and westward.

Our planters neglect the education of their sons in the business of planting, and too often have occasion to indulge in bitter regrets for this omission. How few of them on attaining their majority and being presented by a kind father with a plantation and hands are qualified for its judicious supervision? They know nothing of the culture of a crop—of what constitutes a day's labor—of seed time and harvest—of the feeding and caring for of their stock. They are deceived by their workers and duped by their overseers. A few years reveal to them the prospect of bankruptcy, and the overseer becomes the owner of the estates which he lately supervised. The original owner, the untrained and uneducated son, is less censurable than the overkind father, who neglected to teach him in his youth the practical duties of the business of life he was appointed to pursue.

But I cannot longer detain you in pointing out amendments to the domestic policy of South Carolina. I should have been gratified to have given you some thoughts on the culture of the vine and the manufacture of wines in the mid-

dle and upper districts ; a new department in husbandry, which will certainly, at no distant day, absorb profitably much of the agricultural labor of the State, and also some thoughts on leveeing and draining the swamp lands of the lower districts, which would open to cultivation a vast area of lands whose fertility would compare with the valley of the Nile. I leave these and other topics to those whose experience and greater wisdom will enable them to entertain and instruct you more thoroughly than I can hope to do.

Mr. President and gentlemen of the Institute, my task is nearly ended. You have my contribution to this Institute over which you preside, "would it were worthier." I have attempted to enforce the conviction that our prosperity is absolutely dependent upon the judicious distribution of labor and capital—upon its diversion from agriculture to manufactures and the mechanic arts. My ambition on this interesting occasion has been not to indulge in the rhetoric of the orator, but to turn the attention of my countrymen, by practical suggestions, to the best means of stimulating and developing a new and vigorous prosperity. Examine these suggestions with critical caution ; accept such as are founded on wisdom ; reject those based on error, and do something to make Charleston, the pride of every true-hearted Carolinian, a great city—great in her commerce, great in her tonnage, great in her mechanic arts, great in her manufactures, and great in the number and enterprise of her inhabitants.

Do something to make South Carolina a successful rival to all her competing associates in the mechanic arts and manufactures, and build up for her a fame as honorable and enduring to the skill and genius of her sons in the industrial records of the historian, as that intellectual and patriotic fame which our fathers reared for her, and which now lights up so brilliantly every page of her history.

TEXAS AND HER RESOURCES.

The following sketch is from the pen of a gentleman who has been a citizen of Texas for more than twenty-six years, and was prepared by him for the pages of our Review. It will be followed by a series of similar papers upon this most interesting portion of the southwest. We invite such contributions from all sources.

Velasco is situated at the mouth of our great central river, (the Brazos,) on perfectly high and dry land, fronting both the Gulf and the river, with an elevation of surface securing it from inundations by the influx of the Gulf or the head waters of the river. These facts were demonstrated, first, by the freshet in the Brazos of 1833, when that river attained a

perpendicular elevation of water never before known; and second, by our last autumnal equinox, when the tides of the Gulf swelled to a height exceeding anything within the memory of man. This town is the only one (known to me) on the coast of the Gulf of Mexico, within the limits of the United States, perfectly secure from inundation.

I will now submit matter-of-fact statements in relation to the port and harbors of this town. There is near the mouth of the river a sand-bar, varying from four to eight feet depth of water over said bar. At present it is seven feet; which has been gradually increasing, from an average depth of five to seven feet, since the communication of the waters of Galveston bay and Oyster creek with the mouth of the river, by a canal for steamboat navigation. To what extent the depth of water on the bar may be increased by the late canal improvement is problematical. Of this fact, however, we are certain, that the increased quantum, and consequent increased pressure of water, at the mouth of the river can do the bar no injury.

This bar of which we speak, affording at present seven feet water, is situated about two miles from the immediate mouth of the river, and is only one quarter of a mile in width. After passing this quarter mile of shoal water there is within two hundred and fifty yards on the Gulf side five fathoms water; and on passing the said quarter mile from the Gulf into the river we find, at the distance of two hundred and fifty yards within the river, five fathoms water; thus affording to the town two harbors—one within the river as safe as a dry dock, after entering; the other in the gulf, with holding-ground for shipping unsurpassed by any in the world, and sufficiently capacious for the whole and full accommodation of all the shipping of the world; extending (as it does) from the west pass of Galveston bay, on the east, to the pass of Matagorda, on the west, a distance of full sixty miles, without one natural key, or sand-bar, running out from the coast, rendering the use of light-boats necessary to the guidance of vessels entering the harbor. Although this is an open roadstead, the character of the holding-ground will secure any vessel, with sufficient ground-tackle, from harm.

This fact I give on the authority of Admiral Bordean, who commanded the French fleet in the Gulf of Mexico in the years 1838-'39. On his return through the Gulf, after the bombardment and reduction of the castle and city of Vera Cruz, he anchored his squadron off the mouth of the river Brazos, within four miles of the town of Velasco, for the purpose of provisioning and watering his vessels. He remained

ten days at this anchorage, the greater part of which time was passed in the town, at the private residence of General T. J. Green. In frequent conversations the admiral remarked that the outside harbor of the port of Velasco (although an open roadstead) was decidedly the best known to him on the Gulf. We know that he laid off the port of Vera Cruz for many months, and that his high character as a nautical man entitle his opinions to reverential respect.

We will now direct attention to this location, in connexion with the live-oak forest of Texas. The mouth of the Brazos is the acknowledged centre of this extensive forest, densely growing on the banks of said river, on the river San Bernard, and Oyster creek, and extending back from each bank of said streams to the full extent of tide-water navigation, which may be fairly estimated at fifty miles, (calculating their meanderings,) embracing an area of two hundred and fifty thousand acres of live-oak growth. The exclusive right to the live-oak growth on these lands can, at present, be purchased (through all time) at six dollars per acre. If the United States were to make a purchase of the exclusive right in this timber, the government would have an exhaustless supply of the finest ship-building material on the continent, situated on tide-water streams and discharging their waters into the Gulf of Mexico; *or, indeed*, what a vast field is here opened for individual enterprise.

I have been led into this digression by the magnitude of the subject involved.

We will again return to the consideration of Velasco, and its local advantages. The river at the mouth of which this town is located is the only one emptying into the Gulf where a formation of rock is found at the head of tide water. Sandstone is found at Orozimbo immediately at the head of tide. Limestone of very superior quality is found about six miles above this point, on the west side of the river, but not re-appearing on the east bank, nor does it extend to the river San Barnard, distance fifteen miles, (west.) This stratum of stone extends westerly about twelve miles, where it is abruptly cut off, presenting a decided case of accidental formation. There is, however, a sufficiency of limestone in the field already explored to construct wharves, docks, or a break-water, affording over the bar a depth of thirty feet water, (there being in the river more than thirty feet head water.) This improvement would render the inner harbor of Velasco more than equal to all the requisites necessary for a great naval depot.

We will now take an immediate home view of the advan-

tages of Velasco compared in health, luxuriance, and cheapness of living with every other sea-port in the Union. The notoriety that this place has acquired for health throughout the State would seem to render unnecessary a single remark on the subject, though, for the information of strangers, it may be proper to state the reasons for the uninterrupted good health enjoyed. It is the resort for health of all the neighboring country, from a full knowledge of the salubrity of its atmosphere, and the unsurpassed luxury of its sea-bathing. Its position immediately on the Gulf, having no bay behind of alternate salt and fresh water, no fresh water lakes on the west or southwest to generate malaria, we breathe an atmosphere fresh from the bosom of an inland ocean before it meets earth's pollution.

On the subject of living we will present items of cost. Fresh beef, of superior quality, we command at six cents per pound; venison (in abundance) at five; mutton, lamb, kid, poultry, pigs, eggs, and butter as cheap as in any other sea-port market; fish, oysters, and wild fowl we have in wasteful profusion; fuel without cost, that essential article being brought almost to our doors by the annual freshets in the rivers; bacon, flour, coffee, tea, and rice at Orleans prices, with the addition of freight; sugar, syrup, and molasses are the products of our immediate neighborhood; corn meal, seventy-five cents per bushel; sweet potatoes, fifty cents. Other vegetables for table use are raised here in abundance at as little cost as in any other section of the country. The above facts come within my own knowledge. I therefore vouch for their verity.

Texas is now a member of the Federal Union, and we will here take occasion to direct attention to the ulterior prospects of the town of Velasco, connected as she must be with the political and commercial relations of the Union; bearing in mind that Texas is at present a frontier State; not forgetting the probabilities of war, and its certain theatre—the Gulf of Mexico.

The sovereign authorities of this mighty nation stand charged before the world with a morbid thirst for extension of territory. Whether this charge is founded in fact or is a calumny on the sovereign people, I will not hazard an opinion; though in honest sincerity of soul I for one do aver (however much it may be charged with morbidness) that in my humble judgment it is a most laudable thirst, having for its object the extension of the blessings of liberty to that portion of the human family who have capacity to appreciate and intellect to cultivate the inestimable treasure; the first best gift of a

most munificent father to his chosen children, withholding the blessing only from those to whom it has been forbidden by an especial ordinance of Almighty God, handed down to us through his chosen servant, Moses.

The ordinance will be found in the third book of Moses, called Leviticus, chapter the twenty-fifth, verses forty-fourth, forty-fifth, and forty-sixth. And may I here be permitted to ask, whether there can exist a rational soul so hardened in iniquity as not to shrink with horror from the gross sacrilege of questioning either the wisdom or justice of an ordinance emanating from a source so high?

From this digression, for which I contracted in the beginning, I will now return to the text. In the event of a war (which is not improbable) with any one or two of the maritime powers of Europe, the theatre of that war will inevitably be the Gulf of Mexico. Texas, with an unprotected coast of from three to four hundred miles, with all her sea-port towns, would be effectually cut off from all connexion with her sister States. Her towns on Galveston bay, at the mouth of the river Brazos, on Matagorda, Aransas, Corpus Christi, and Brazos Santiago bays, would inevitably become the unresisting prey of our enemies; our luxuriant and improving seaboard settlements plundered and laid waste without, in our present condition, the slightest show of resistance.

Texas, with her wide domain, entered the Federal Union without cost to the government. She was not a conquered or a purchased (peopled) territory. No, her gallant people, who rescued this fairest portion of the globe from the iron grasp of military despotism, most earnestly solicited the happy connexion that now exists. Merging their sovereignty, and by the same act evincing a liberality equalled only by their chivalry, presented to the United States government their navy, dock yards, and customs.

It is not my purpose to make the impression that this conduct on the part of the people of Texas gives them claim to peculiar favor or extra protection. They make no pretension to such claim, though they cannot help positively feeling that they are entitled to a due share of favor and protection from the federal government. The citizens of Texas, since their connexion with the Union, have on all occasions been ready and willing to strip their arms and bare their breasts to the enemies of our country, whether they be civilized or savage foes. Thanks to a kind Father on high, they have the nerve to meet and a resignation to bear, in defence of their country and constitutional liberty, whatever the chances of war may throw in their way.

In speaking of constitutional liberty, we beg to be distinctly understood as having reference to the liberties guaranteed by the hallowed Constitution bequeathed by our god-like fathers, (a gift rather of inspiration than of human wisdom,) not alone to their immediate children, but to the whole human family, save those against whom a positive interdict had been pronounced.

In defence of that Constitution in its original purity, I, for one, (and I believe I am expressing the feelings of the people of Texas,) will war to the knife, regardless of odds; and with open arms receive the cold embrace of death with loud cheers of exultation, rather than see one syllable perverted or exchanged from that cherished gift of inspiration, the only written instrument known to the world securing to man a full share of practicable and rational liberty.

We will again revert to our text. It has been already stated that the finest harbor on the Gulf of Mexico was within four miles of the town of Velasco. In which harbor the congregated shipping of the world can lay and ride in perfect security. It has also been premised that the inner harbor of said town, when entered, gives as perfect protection to shipping as a dry-dock. And we will now undertake to demonstrate that protection might be secured at a small cost, estimating the importance of the work in a national point of view, without regard to the incalculable advantages immediately accruing to the State of Texas in her present defenceless condition.

The fact cannot be disguised that war with one, two, or perhaps three of the great maritime powers of Europe is by no means improbable; and that in the event of such war the Gulf of Mexico must be its principal theatre. Permit me now, most respectfully, to call the attention of our government to the defenceless condition of Texas through her whole extent of seacoast, cut off as she will be from her sister States; without a single rallying point for her willing and gallant people; without a solitary place of refuge through her extended coast for crippled vessels of war, *when*, (to our knowledge,) by the expenditure of a few millions of the daily-announced surplus treasure of the nation, protection can be given to our seaports, and a place of refuge (near the centre of our seaboard, measuring from east to west) for our disabled shipping, where they can be refitted for service on the waters where their services are required.

At the mouth of the river Brasos thirty feet depth of water can be taken over the bar at a cost hardly worth estimating, compared with the importance of the work in a national point of view. We have also the materials (live oak and exhaust-

less banks of sand) for the construction of forts as impregnable as the rocks of Gibraltar, when manned by the tried, hardy, and practiced yeomanry of Texas. Superadd to these considerations the necessity we are under, in the event of war, of having a southern naval depot equal to all the requisites of the largest class of war vessels.

I will here beg leave to suggest another means of connexion between the extreme southwestern State of the Union with her sister States in the event of foreign war.

From the river Mississippi to the Rio Grande an inland steamboat communication can be made on tide water levels through our bays, lakes, bayous, and lagoons, at a cost almost too small to be estimated, when we take into calculation the utility of such communication, either in time of peace or war. Our commerce through this whole extent would be freed from all the dangers of the sea, to say nothing of the security to human life in conducting the commercial and friendly intercourse between these two distant points, and all the sea port towns intervening between these great rivers.

By reference to the maps of Louisiana and Texas, it will be seen that nature has very nearly effected this important work. Limited as is the present capital of Texas, this subject has already attracted individual enterprise. In the city of Galveston a company was organized who have recently completed a canal connecting the waters of Galveston bay with the mouth of the river Brazos, giving a choice of depots for the rich products of this immense river without the cost of reshipment. This work, if extended, would give a choice of seaports to the productions of all our rivers entering the Gulf between the Rio Grande and Mississippi, without incurring the dangers of the sea, nor the hazard in passing the bars to reach the sea.

The practicability and economy of the proposed improvement has been demonstrated by the success attending the skill and energy of Captain Bradbury, who had charge of the operative department in executing the work for the Galveston company. With this gentleman I have the pleasure of a personal acquaintance. I have been on board his steamboat excavator, and witnessed with delight its successful operations under his able management.

Should the government deem it expedient to make this inland communication, so important to Texas in the event of a maritime war, I have no doubt that Captain Bradbury (having completed the Galveston and Brazos canal) would undertake, on reasonable terms and in reasonable time, to execute the plan through its whole extent.

It is unnecessary here to animadvert on the disproportioned expenditure of public treasure in improvements on, and protection given to, the northern and southern sections of our Union. It would, indeed, swell this article to an unreasonable length. I will, therefore, refer my readers for information on this subject to the very able pamphlet published by Mr. Garnett, of Virginia, in 1854, where full and certain information will be found.

This digressive article is furnished for publication under a conviction that each digression is entitled to separate discussion, and that by presenting them to public view abler pens will be enlisted in their discussion than I affect to wield.

THE FAILURE OF FREE SOCIETY.*

The failure of free society is an idea that will seem novel and preposterous—something new under the sun—at first blush, to almost every mind.

The reverse of the picture is but too familiar. We have all heard of the abominations of slavery; every gale that sweeps from the north brings to our ears harsh denunciations of the peculiar institution of the south, and our auditory nerves have become so attuned to the sound that we have yielded a reluctant assent to its burthen, and, admitting slavery to be an evil, have sought to justify our holding negroes from the doctrine of expediency. Mr. Fitzhugh, in his defence, assumes the higher and more tenable ground of right and reason, and instituting a comparison between the relations of capital and labor, as they exist in southern slavery and in the free societies of Europe and the northern States of the Union, endeavors to prove the vast superiority of the southern system, in its principles, tendencies, and results, in its care for the comfort, protection, and happiness of the laborer, over the glittering structure erected upon the much vaunted liberty and freedom basis of northern society. European and American abolitionists, who, without having a single, social, or religious theory in common, have yet, with marvellous unanimity, banded to hurl foul scorn upon the south, are told by our author to look at home at their own societies, and to see how the discontent, misery, yea, even the starvation of the working classes, are gnawing at

* *Sociology for the South; or the Failure of Free Society*: By George Fitzhugh.

“The thing that has been, it is that which shall be; and that which is done, is that which shall be done; and there is no new thing under the sun.”—*Eccles. 1: 9.*

Naturam expelles furca, tamen usque recurret.—HORACE. Richmond, Virginia, A. Morris, publisher, 1854: 1 vol., 12mo., p. 310.

their vitals—the laceration and suffering but illy concealed by the fantastic garb of liberty. It is, indeed, Hamlet fighting Laertes with Laertes' poisoned rapier. Although it has been a common argument with southern writers to point to the misery of Europe as a reply to the criminations of abolitionists, yet this recrimination has simply meant heretofore, Mind your own business; you have enough to do at home; it were better to evidence your love of humanity by a little practical benevolence in saving from the clammy clutch of famine and despair the suffering Irish or other poor of your land than by indulging in lachrymous lamentations over the fancied ills of well-fed and happy Sambo. Mr. Fitzhugh does this; but he pushes the argument further, and shows that all the crime and suffering of Europe is the legitimate result of the free, *laissez faire* and *pas trop gouverner* system of political philosophy; he shows that the establishment of free labor arose from no higher conceptions than all antiquity cherished of humanity; no nobler estimate of our duties to our fellow creatures than the sentiments of Terence, at which the whole Roman theatre rose: *Homo sum, humani nihil a me alienum puto!* expresses, but from the sordid calculation of capitalists, that if one can have the profits arising from labor, without being saddled with the cost of rearing it up and maintaining it when old age superinduces infirmity and dependence, his means of producing wealth must be considerably increased and rapidly facilitated.

The argument is conducted in a manly, vigorous, attractive style. In this little book he takes issue with political economy, considered as the science of free society, with its dogmas of "free competition" and "supply and demand," *et id omne genus*, for he considers that he finds in its teachings the Pandora's box, whence have issued all the ills that the employees of Europe now endure. Adam Smith's philosophy of free trade is most ably analyzed in the first chapter of this comprehensive book, and an English author is brought forward to testify to its effects in these words: "There is no disguising from the cool eye of philosophy that all living creatures exist in a state of natural warfare; and that man (in hostility with all) is at enmity also with his own species. Man is the natural enemy of man; and society, unable to change his nature, succeeds but in establishing a hollow truce by which fraud is substituted for violence." The term "society" applied to such a community is evidently a misnomer; for where all are "hostile, antagonistic, and competitive," and free, the sovereignty of the individual is triumphant, and every man is his own church, his own govern-

ment, and, says Stephen Pearl Andrews, his own society. Where so large a number of subjects, involving the most philosophical argumentation, and exposing at every step the most popular fallacies, is treated in so small a compass, the work must, of course, be rather suggestive than elaborated; and, in endeavoring to express his meaning with epigrammatic point, Mr. Fitzhugh is sometimes betrayed into seeming paradox. Some of his statements are to be taken *cum grano salis*; such, for instance, as that "all husbands at the north are wife murderers;" and when he says that "it would be difficult, very often, for the most ingenious casuist to distinguish between sin and liberty." In this latter statement the shock our reason receives from its enunciation is occasioned by an abuse of terms; for he, when speaking of *liberty*, means *license*, and we, receiving it in its common acceptation as "freedom from violent restraint," can perceive no connexion between our definition of liberty and sin, while we can readily see how license and sin are related.

It is not our purpose to notice the many interesting topics this little volume offers to our consideration in an incidental rather than a direct manner, such as banks, usury, towns, rivers and roads, education, exclusive agriculture, association of labor, the balance of trade, small nationalities, &c., but but after considering briefly the comments of Mr. Fitzhugh upon "The Declaration of Independence and Virginia Bill of Rights," we will direct the reader's attention to the chief object of the book, the proof of the failure of free society.

Mr. Jefferson's preamble to the Declaration of Independence, asserting that "we hold these truths to be self-evident that all men are created equal; that they are endowed by their Creator with certain inalienable rights, that among them are life, liberty, and the pursuit of happiness," has always to our mind presented a singular contrast with the well-known saying of the sage of Monticello, "that some were born with saddles on their backs, and others booted and spurred to ride them;" and observation would incline us to decide that there was more truth and less romance in the latter declaration than in the first. Our diligent revolutionary cultivator of "peas and philosophy" was indebted for the would-be axioms of the Declaration of Independence—as he was indebted for all his political, social, and religious theories—to D'Alembert and Diderot, French infidels and the editors of the world-renowned *Encyclopédie*. It is true that the idea of equality—equality before the law—is recognised by Herodotus (book 3, sec. 80) in the observation that "the government of the many has the most beautiful name of *Isonomia*;"

but this was a mere euphonious word, the type of no real thing; for, at the very time Hereodotus wrote, in Athens twenty thousand freemen gave law to four hundred thousand slaves. Jean Jacques Rousseau shares with the Encyclopédie the honor of promulgating to modern Europe, with many other eccentric theories—as that men are happier in a state of nature than under the laws of civilization—the assertion that men are born equal in civil and political rights. These formula have frequently been assailed by statesmen and philosophers. England, though as a sentiment she may approve, has never acted practically upon this theory. “Her Bill of Rights did not declare, nor did the genius of Somers or Maynard conceive the political axiom, that all men are born equal. It may find acceptance from individuals in England, but it is disowned by English institutions,” says the distinguished Massachusetts Senator, Charles Sumner. Lord Brougham, Carlyle, and Calhoun have all ridiculed the idea of equality as absurd. Major Lee, in his “Observations on Jefferson’s Writings,” animated perhaps by too much private spleen, and indulging more in verbal than logical criticism, has characterized the declaration as being “exuberantly false, and arborescently fallacious.” Mr. Fitzhugh’s argument is substantially this: All concede that men are not born physically, morally, or intellectually equal; some are strong, others weak; some amiable and brave, others cowardly and prone to all kinds of wickedness. These natural inequalities beget inequalities of rights. The weak in mind or body require guidance, support, and protection; they must obey and work for those who protect and guide them; they have a natural right to guardians, teachers, or masters. Nature has made them slaves; all that law and government can do is to regulate and mitigate their slavery. In the absence of legally constituted slavery their condition would be worse under that natural slavery of the weak to the strong, the foolish to the wise and cunning. The wise and virtuous, the brave, the strong in mind and body, are by nature born to command and protect; and law but follows nature in making them rulers, legislators, judges, captains, husbands, guardians, and masters. Circumstances, education, and association increase and aggravate these natural inequalities among men from generation to generation. No institutions can prevent the few from acquiring rule and ascendancy over the many. Liberty and free competition invite and encourage the attempt of the strong to master the weak, and ensure their success. “Life and liberty” are not inalienable; they have been sold in all countries and in all ages, and must be sold so long as human

nature last. Every sailor and soldier alienates his life and liberty and the pursuits of happiness; every wife, ward, and apprentice has aliened liberty, and to some extent the pursuit of happiness. The great object of government is to restrict, control, and punish man "in the pursuits of happiness." All crimes are committed in its pursuit. Under the free or competitive system most men's happiness consists in destroying the happiness of other people. This then is no inalienable right.

This argument is, to our mind, conclusive, and is—

"What oft was thought, but ne'er so well expressed."

Mr. Fitzhugh sums up as follows, and, as it will be more convenient, we will consider his arguments in the order he here states them:

"Our chief object has been to prove the failure of free society. We knew if we succeeded in that, the various theories propounded in this work on other subjects would be found, when closely examined, necessary results, or legitimate sequences.

"In order to enable the reader fully to comprehend our argument, and to furnish a fair field for its refutation if false, we will now sum up the chief points which we have made, and on which we rely:

"*First.* Free society is theoretically impracticable, because its friends admit that 'in all old countries the supply of labor exceeds the demand.' Hence a part of the laboring class must be out of employment and starving, and in their struggle to get employment reducing those next above them to the minimum that will support human existence.

"*Secondly.* The late invention and use of the word 'sociology' in free society, and of the science of which it treats, and the absence of such a word and science in slave society, shows that the former is afflicted with disease, the latter healthy."

"*Thirdly.* We prove the failure from history and statistics.

"*Fourthly.* We prove it from the exodus now going on from western Europe with all the reckless panic and trepidation of a '*sauve qui peut!*'"

"And, lastly, we prove it from the universal admission of all writers who have of late years treated of the subject of society in free Europe."

The true object of societary organizations is, and should be, the happiness of the greatest number. The happiness of the greatest number of the laborers under free society depends upon their wages. When the supply of labor exceeds the demand, as it confessedly does in all old countries, the law

of free competition grinds down wages to a pittance that will not support existence. The poor war with one another by underbidding, and the capitalist, good easy man that he is, employs the laborer who will work for the least wages. Laborers are more abundant than employers, and the consequences are a half million die of hunger in one year in Ireland, and jails and poor-houses are the receptacles of those whom the law makes equals and enemies.

The law of nature is competition. The strong animal exterminates the weak, and man, unrestrained by government, preys upon his fellow. The end of government is to protect the feeble in mind and body from the rapacity of the vigorous; but the liberty and equality school of philosophers would do away with these governmental restrictions and reinaugurate the law of nature, or free competition. "Might makes right," and "all men are free"—free to stand on their axioms. Every candid mind must confess the cogency of this reasoning, and admit that the social theories of Pericles and Antony, of Cicero and Socrates, of Fabricus and Justinian, which afforded protection from violence, maintenance in sickness and old age, and secured employment for their offspring, to the large majority of every community, the working classes, was far superior in its results to the experiment of free competition and equality tried in a little corner of Europe for the last three hundred years. Happy would the poor Irish have been if they could have preserved life at the price of liberty, as Sismondi relates the greater part of the free citizens of Rome did, when the barbarian overran the empire; after a short time they submitted themselves as slaves to some powerful lord, having found themselves incompetent of self-preservation. Famine and the pestilence that walketh at noon-day are more formidable and ferocious foes than were the Goths and Vandals, and the Irish and European freeman attacked by them found, like the Romans, that "no one would protect them, no one would relieve them, no one would maintain them without having some lasting interest in their labor, and this interest could only be obtained by their becoming his property."

Mr. Fitzhugh's second proposition is, that the invention of the name and science of sociology in free societies, and its absence in slave societies, proves the disease of the former and the health of the latter. Sociology is a hybrid term, meaning the science of society, the first half from the Latin, the latter from the Greek. The Greeks had no idea of society existing under any other form than *Polis*, a city. The city was the heart of the State; and politics, political philosophy, and

political economy referred simply to the metropolitan life. The country was inhabited by serfs under overseers; the city by freemen and masters. Hence there was an intimate connexion between government and society under the Greek policy, embraced by the general term economy. In small States, where the city constituted the vitalizing power of the community, the action of society and government upon each other was reciprocal and equal. A consideration of these political theories constituted the chief employment of the philosophic minds of Socrates, Plato, and Aristotle. The vast dependencies of the Roman republic caused a much larger meaning to be attached to the word "politics" than it had hitherto enjoyed, and at the same time introduced a new word—*sociales*—expressing the mutual rights and duties of the 1,200,000 men the city of Rome then contained.

Comte, the French metaphysician, was the first person to utter this term, sociology; whether the coinage is his is dubious; and although he himself is no advocate of socialism or communism, yet its speedy adoption by the socialists, and its great currency throughout Europe, proves that such a science exists there, and has its professors; which is just as conclusive a proof of social disease as the practice of medicine is a proof of the existence in man's body of all the ills that flesh is heir to. In the south we have no anti-renters, perfectionists, and few atheists; while in the north every man has some favorite social theory to promulgate; and in religion they seem equally divided into infidels and millenarians. "Christianity melting into infidelity," is the characteristic term used by an able writer, in reference to one-half of the north; and the author of the "Democracy of Christianity," speaking for the other half, longs for the descent of Christ upon earth, when the lion and the lamb shall live in harmony together, and every man shall enjoy his own vine and fig tree, which he interprets to mean a certain allotment of land. These facts, proving the decrease of free society, and the total absence of such theorists and ideas from the south, proving the healthy tone of its system, we may fairly conclude the second proposition established.

The next argument is testimony from history and statistics to the failure of free society. The fact, admitted by all, that crime and pauperism have increased, *pari passu*, with liberty, equality, and free competition, would seem to render unnecessary much argument on this point; and when we add that, with slavery, the Greeks, the Romans, the Egyptians, and the Persians, and all Europe, for a thousand years, knew nothing of pauperism and beggary, but that they are the imme-

diate results of the free society experiment, the reasoning, if we admit crime and pauperism to be fatal evidence against the efficacy of any system, is impregnable.

The fourth proposition of Mr. Fitzhugh is that the exodus from western Europe is a proof of the failure of free society. This emigration, which threatened at one time to leave Ireland without inhabitants, was undoubtedly occasioned by the imminent danger of starvation at home, and the hope of passing from the Egypt of bondage and want to a Canaan of gold, milk, and honey. Although our Know-nothing movement has caused the number of emigrants to decrease from 34,906 in March and April, 1854, to 5,358 in the same months of this year, and the withdrawal of so many laborers from the field has diminished the competition at home, and temporarily relieved the working classes, yet the fact that such an exodus, to prevent extermination, should be necessary, proves the inherent defects of the competitive system.

The last statement of Mr. Fitzhugh is, "the admission of all writers who have of late years treated of the subject of society in Europe." This is a question of fact, and we will summon one of Mr. F.'s witnesses to prove the universality of the admission. Blackwood, November No., 1850, says:

"No man with a human heart in his bosom, unless that heart is utterly indurated and depraved by the influence of mammon, can be indifferent to the fate of the working classes. Even if he were not urged to consider the awful social questions which daily demand our attention in this perplexing and bewildered age by the impulses of humanity, or by the call of christian duty, the lower motive of interest alone should incline him to serious reflection on a subject which involves the well-being, both temporal and eternal, of thousands of his fellow-beings, and possibly the permanence of order and tranquillity in this realm of Great Britain. Our civil history, during the last thirty years of peace, resembles nothing which the world has yet seen or which can be found in the records of civilization. The whole face of society has been altered; old employments have become obsolete, old customs have been altered or remodelled, and old institutions have undergone innovation. All this we call improvement, taking no heed the while whether such improvement has fulfilled the primary condition of contributing to and increasing the welfare and prosperity of the people. Statistical books are written to prove how enormously we have increased in wealth, and yet, side by side with their bulky tomes, you will find pamphlets containing ample and distinct evidence that hundreds of thousands of our industrious fellow-countrymen

are at this moment famishing for want of bread and lack of employment, or compelled to sell their labor for such wretched compensation that the pauper's dole is by many regarded with absolute envy. Dives and Lazarus elbow one another in the street, and our political economists select Dives as the sole type of the nation. To work is not only a duty but a privilege; but to work against hope, to toil under the absolute pressure of despair, is the most miserable lot that the imagination can conceive. It is, in fact, a virtual abrogation of that freedom which every Britton is taught to consider his birthright, but which now, however well it may sound as an abstract term, is practically, in the case of thousands, placed utterly beyond their reach. * * * Here is a question presenting itself to the consideration of all thinking men—a question which concerns the welfare of hundreds of thousands—a question which has been evaded by statesmen so long as they dared to do so with impunity, but which now can be no longer evaded; that question being, whether any possible means can be found for ameliorating and improving the condition of the working classes of Great Britain, by rescuing them from the cruel effects of that competition which makes each man the enemy of his fellow; which is annually driving from our shores crowds of our best and most industrious artisans; which consigns women, from absolute indigence, to infamy; dries up the most sacred springs of affection in the heart; crams the jail and the poor-house; and is eating like a fatal canker into the very heart-blood of society."

Here we conclude our critique, inadequate to the merits of our author, as we know it to be, remarking to the general reader that though we have sought to give these remarks a direct bearing upon but one object of Mr. Fitzhugh's book, yet the work itself is most varied in its topics and their treatments, and would afford an hour's most delightful reading to the dullest man in christendom.

NOTE.—A Philadelphia writer, in the Charleston Mercury, speaks as follows of Mr. Fitzhugh's work:

"The aim of the writer is to prove that Fourierism, socialism, communism, or free society, (for the name is Protean,) is a most egregious failure. The scope of his argument and illustrations has necessarily drawn in the general question of slavery—slavery in its most enlarged interpretation—whether white or black—and, I think, he convincingly establishes the truth that the wisest, happiest, and most cheerful form of socialism is slavery itself; that is, a community governed by one head, and where both master or director, and those whom he governs, act and react on each other by the consciousness of mutual dependence, affection, and mutual interests. He shows that in the fearful struggle that is perpetually and so anxiously agitating both capital and labor in these northern States—the struggle between rich and poor—that the first minds, both in Europe and in this country, are gravitating towards the same opinion, namely: that slavery is the best security for the latter—that it is the true relief for pauperism, which is the growth of free society, so-called.

"Much research, strong common sense, great condensation of thought—and these clothed in language clear, nervous, and almost aphoristic—make it an instructive and agreeable book either to the learned or unlearned. Being written in brief divisions or chapters, our children can easily be taught to comprehend it, and will find in this armory weapons to defend what has been so much vilified and misrepresented. We will learn how to protect a great principle on its own merits, and not to be restricted to reason on the mere question of social necessity or expediency, as has been done hitherto—many persons admitting slavery to be an evil, thus making a gratuitous surrender of the whole cause, and then begging quarter upon pity.

"The splendor, animation, and crowded population of the northern cities, excite, bewilder, and delight southern men and their families. Compared with the calm—the easy indolence of their own communities—a painful sense of inferiority depresses them when they go back to their own homes. The difference is as between a magnificent panoramic view and a dark still landscape, life in action and life in stagnation.

"Let them be content. This writer will do much to reconcile them to what they have, and what they really are, when he reveals to them the interior view—the miseries of pauperism—with its grim and hideous attendants, its homicides and its wife murders, its dire degradation—as shown in penitentiaries and houses of refuge, even for children—its opium eatings, its taxations, and police-spies parading the streets in regiments. These last recalling what Carlyle deridingly has written of our institutions, that "they are anarchy, plus a street constable." I cannot but hope that, on some persuasion from you, our book-sellers will bring the work into their collections, thus placing it within the reach of every one."

THE SOUTH AND THE UNION.

THE UNION, PAST AND PRESENT—HOW IT WORKS, AND HOW TO SAVE IT.

⌈Agrarian societies are numerous at the north; they hold *national conventions*, and have organs, avowed and secret, in the newspaper press. Long leases are distrusted at the north, for there is danger that the tenants will refuse to surrender at their close. Whole counties have united in refusing to pay rents which were justly due, and the officers of the law, while in the execution of its mandates, have been deliberately murdered. And these violators of the rights of property and life, of the laws of God and man, had strength enough to elect a governor whom they could force to pardon the convicted murderers! So strong is the agrarian spirit, that so eminent a man as Mr. Webster is forced to conciliate it by proposing in solemn Senate to confiscate the public lands, by giving a quarter section to every free white male, native and foreign, who may choose to enter upon them. To meet all these dangers the free States have no security out of the Union; once left to themselves, their perils would increase ten-fold, for it is essential to the public welfare, to the laborers and the poor themselves, that government should be able to protect all the rights of property. No matter what the sufferings of the laboring class, they would be doubled and tripled by the insecurity of private rights.⌋ In England this ability in gov-

ernment has been preserved by a highly aristocratic constitution, both social and political; but in France the tide has swept away government after government like the waves of the sea; one dictatorship has followed another, now an emperor, now a king, now the *bourgeois* capitalists, and now mere numbers, all equally unstable. And all this despite the fact that France has been, under all dynasties since the first revolution, eminently democratic in her civil laws. The reason is not hard to discover. At the bottom of all French politics—and the same applies with equal truth to the free States of the north—lies the idea that *might makes right*; in other words, that a majority of mere members has a natural, indefeasible, and absolute right to govern the minority. No matter about the injustice and oppression of the rule, the minority has no remedy short of civil war. This theory acknowledges what it calls the right of revolution in extreme cases; but that right can only be established and legitimated by the success which proves the minority to be the strongest party, and thus converts them into a majority, which brings us back to the starting place, that *might makes right*. All the free States, like France, are organized upon this principle of a majority's unlimited right to rule; their idea of a perfect State is a highly centralized, consolidated government, where the will of the greater number may be expressed and executed with the greatest rapidity and certainty. Such a government does not confine itself to the external relations of the State, and the protection of life and property at home, but it invades the interior of the family; it destroys the unity of married life by creating separate interests in the parties; it robs parents of the education of their children, so as to destroy individuality of character, and train and prune them to the same moral and mental stature. The majority of numbers is more powerful than the Czar, because it is *physical right*; it is more grinding in its tyranny, because it has less feeling of personal responsibility, and its Argus eyes can search every corner of the country; its infallibility is less open to attack than the Pope's, because it is, itself, public opinion. Like other despots, it never hears the truth; its ears are trained to feed upon a fulsome flattery, and throngs of fawning courtiers are ready to call its unbridled passions, greatness, and its lavish expenditure of the taxes, wrung from the minority, goodness. The love of true liberty and manly independence of thought cannot flourish in such a community; the greediness of office and the love of power take their place; there is an eager courting of popular favor, a feverish fear of differing in opinion from the majority, a making haste to leave the few and

join the many. Hence the politicians of the free States have always been wanting in the comprehensive views necessary to found governments or parties, and in the moral courage, the energy, and administrative talent requisite to conduct them with success. This is acknowledged by Theodore Parker, one of the best writers of New England, in his discourse on the death of John Quincy Adams, and he attributed the superiority of southern statesmen in this respect to their slave institutions. These accustom them early to deal with men, and they learn to act "as those having authority." The management of the little commonwealth of the plantation is an excellent training for the administration of a larger State. Hence it is that the north has always had to look to the south for generals and Presidents. No one will deny that this, like all general rules, has had brilliant exceptions, especially in military life, where the nature of the calling and the tenure of the office begets more independence of character. But the north has never produced a statesman who has durably stamped the impress of his mind upon the legislation of the country, and made his thought the thought of his own generation and of posterity. There is no great measure of public policy which was originated by a northern lawgiver. Not even such men as Adams or of Webster have been able to associate their names with the authorship or development of any far-reaching, abiding acts of legislation. The union of wisdom, in the highest scripture sense, with moral and physical boldness, with firmness and prudence, which made Washington the leader of our revolutionary armies, and the appropriate guardian of our infant federation, was eminently characteristic of the southerner and the slaveholder; it was the *degree* only, not the *kind*, that was miraculous. Such was the chief leaders of the convention, the men to whose suggestion the Constitution owes its essential features—Madison and Mason, Randolph and Pinkney, all of the south. The founders of the two great parties were neither from the north; Hamilton was a West Indian, and Jefferson, who breathed his soul into the republican party, and Madison, who gave it a shape, were both Virginians. In the war of 1812, two Virginians, Scott and Harrison, drove back our foes in the north, while a Carolinian led the southern rifles to victory at New Orleans. All the great measures which have agitated the present generation—the bank, and the independent treasury, the internal improvement system, the American system, and free trade—have been brought forth and shaped by the minds of a Calhoun or a Clay, or carried into practice by the iron will of a Jackson. The only north-

ern Presidents we have ever tried have been failures. The elder Adams, who came into power on the popularity of Washington, in two years broke down, and every vestige of his administration was swept away by the popular voice. His son fared no better, and Van Buren, who mistook cunning for wisdom, was a politician instead of a statesman. The prestige of Jackson's favor could elect him, but nothing could save him after a single trial.

Whatever of greatness our country has attained has been chiefly due to the administrative talent of southern men, and, above all, to the southern vote, which, while it was yet strong enough to be heard, restrained the disposition of the north to convert this Federal Union into a grand consolidated State, on the French model, where the numerical majority might have absolute sway. If the free States were to form a separate confederacy it would soon assume this character. The measures which, as a section, they have advocated in the present Union all have that tendency. The forms of their State governments—their political theories—all conspire to make such a result certain. The small States would be deprived of their equal vote in the Senate, and speedily absorbed by their more powerful neighbors. All the proper work of the several State legislatures, as well as of private enterprise, would be thrown on the central government; the States would become mere provinces, and Congress a national assembly. In such a State there would be no safety for property. The number of those who want property is always greater than that of those who have it, the poor more numerous than the rich; and they will certainly use their acknowledged sovereign right, as a majority, to gratify that want, and take what they please. The northern plan of meeting this danger has always been to create a strong moneyed interest by class legislation, by large government expenditures, and by patronage. Northern statesmen know that the aristocracy of birth is impossible; they hope to substitute the aristocracy of money by means of the funding and paper system, and by the yet more potent umpire of the manufacturing system. In other words, the plan is to govern the masses by the power of money and corruption. The evil day may be thus delayed, but the remedy increases the inequality of fortunes and the difficulties of the laboring poor. Their sufferings are aggravated and their character degraded; and when the outbreak come—as come it ultimately must with the accumulated force of pent up waters—it is the outbreak not of men, but of demons. France is the living and unhappy proof of all our reasonings. The reaction against the tyranny of the numeri-

cal majority, as public opinion, produces the multitude of "false doctrines, heresies, and schisms," the growing infidelity, the Grahamites and Fourierites, the Mormonism and Millerism, and all those wild vagaries of fanaticism to which the people of the free States are so prone, but which cannot live beneath the southern sun. The reaction against the tyranny of the numerical majority, as government, begets the proclivity to mobs and tumults, the instability of all constitutions and laws, which we see manifesting itself in the free States. The only rebellion ever known in the United States against the exercise of undisputed constitutional authority was in Pennsylvania. In Rhode Island the Dorrites would have waged civil war if their leader's courage had not failed him at the crisis, not for any great principle, but merely to determine by a trial of actual physical force—a most rational and logical test—which party was the sovereign numerical majority. Federal authority had to be invoked. When has a southern State ever had to call in foreign aid to settle her domestic difficulties? The legislature at Harrisburg had to be brought to order by a military force; and the Senate of Ohio, after one or two hundred ballotings, lately elected a speaker, who has since been forced to resign for bargain and corruption. The State was near being thrown into a state of anarchy last year by the inability of the legislature to determine who were its members! In the chief cities mobs dispute the right of private citizens to consult their own taste in a play actor; they set fire to convents of helpless females, and they tear down the house of God because it shelters the helpless emigrant from their brutal fury. And yet, when a citizen soldier has the nerve to fire upon them, and vindicate the majesty of the law—an example of moral courage, alas! too seldom found at the north—instead of receiving the thanks of the whole community, his house is the mark of the midnight incendiary, and all the avenues of public honors are forever closed to his approach.

From all these dangers the conservative influence of the south has hitherto preserved the free States. Her tributes of slave-grown wealth have kept up the wages of their labor and the profits of their capital—has delayed the war between rich and poor, and soothed the deep-seated sore—the *immediate vulnus*—in their social organization, which nothing can heal. "So long as the free States suffer the Union to endure, so long will the south continue her good offices; so long will she be ready to extend her aid, through the federal authority, to restrain her Dorrites and her socialists, her anti-renters, and her mobs. For the conservative character of the Union

rests upon the slaveholding States. With them a very different idea of government prevails. They believe that the sovereignty rests with the people, not collectively, but individually. As the Union is a federation of sovereign States, with her several reserved rights; so in their eyes is each State a federation of sovereign individuals (or families, if you will) with their reserved rights. In their belief there are institutions and rights, derived through the laws of nature, from God alone, which are independent of, and prior to, all government. Such are the relations of parent and child, of husband and wife, of master and slave, and the right to property, which all go to make up the great corner-stone of the social edifice—the family. To preserve these institutions in all their incidents, and all their derivative rights, is the chief duty of government, which it cannot fulfil without such an organization as will give a full and fair voice to every interest and every class, and confer upon each a veto upon the assaults of the others, so that legislation shall not be the voice of mere numbers, but a compromise between the majority and the minority—not merely the will of the greater number, but the resultant of the wills of all. Such a government rests its authority, not upon force, but upon the universal consent; there is no despotic public opinion to stifle freedom of thought, no king numbers to flatter, no rapacious majority can use the forms of law to gratify its ravings for plunder, but every class has to consult the interests of others, without whom it cannot act, as well as its own; and the people are trained up to the statesmanlike practice of government in the spirit of union and harmony. The body politic becomes instinct with life and healthy vigor. Public opinion works in its true calling, as the moderator, not the silencer of individual differences. For such an organization the southern States have peculiar and well nigh indispensable advantages in their slave institutions, which forever obliterate the division between labor and capital. The devotion of so large a portion of their surface to cotton, sugar, and tobacco, places, at an almost infinite distance, the day when population will press upon the supply of food; for while the increase of its numbers is in proportion only to the relatively small area that produces grain, the other lands furnish an inexhaustible resource to fall back upon in case of an insufficiency of that production.

When we regard the powerful position in the world which the command of the great staple of cotton confers upon the slave States, their numerous natural advantages in climate and productions, their situation midway in the new hemis-

phere, holding the outlets of northern commerce, and the approaches to South America and the Pacific, through the Gulf, we cannot forbear thinking that they are destined to play a first part in the history of the world, and discerning the finger of God in their stability, while thrones and democracies are tottering around them. Divine Providence, for its own high and inscrutable purposes, has rescued more than three millions of human beings from the hardships of a savage state, and placed them in a condition of greater comfort than any other laboring class in the world; it has delivered them from the barbarous idolatries of Africa, and brought them within the blessings covenanted to believers in Christ. At the same time it has provided the whites of the Anglo-Norman race in the southern States with the necessary means of unexampled prosperity, with that slave labor, without which, as a general rule, no colonization in a new country ever has or ever will thrive and grow rapidly; it has given them a distinct and inferior race to fill a position equal to their highest capacity, which, in less fortunate countries, is occupied by the whites themselves. A large class—often the largest class—living from day to day by the daily labor of their hands, exists, and must exist, in every country; and it is impossible, as a general thing, for the persons of that class to have time, or even inclination, for much mental improvement. The force of peculiar genius may raise one in ten thousand to a higher place in society, but such cases become more and more infrequent as wages diminish with the progress of population, and the care of providing food grows more engrossing. The whole question, therefore, resolves itself into this: Shall the laboring class be of an inferior race, so controlled and directed by the superior minds of the whites, as continually to progress in material and moral well being, far beyond any point it has ever shown a power of attaining in freedom?—or shall that laboring class be of whites and equals, capable of becoming “gods, as one of us,” and yet condemned to a slow, but sure, increase of want and poverty—the slaves of society instead of individuals—isolated from their employers by the invisible, but impassable, barriers of custom, aliens from their hearts, and utterly separated in manners, information, opinions, and tastes? Between the southern master and his slave there is a fellow-feeling in sorrows and in joys, a mutual dependence and affection, which calls into play all the finer feelings of man’s nature. What of all this is there between the northern capitalist and his day laborer? They have not known each other from infancy, nor been partners through good and through ill fortune.

Perhaps the tide of emigration brought them together yesterday, and will hurry them apart to-morrow. The laborer does not look to his employer as his natural protector against the injustice of the powerful, or as his refuge in sickness or in old age. He must find that in the almshouse. If the laborer is a factory operative—perhaps a girl, or even a child, for in manufacturing societies the children of the poor never know the plays or freedom of childhood—he is regarded as but a part of the loom he attends to. Factory labor becomes more and more divided, the employments more and more monotonous, with each improvement in machinery. There is none of that variety of occupation and those frequent calls upon the discretion and intelligence of the laborer, which make the work on a plantation in the south at once the most improving, the healthiest, and the most delightful species of manual labor. The factory operative, on the contrary, is chained to some single minute employment, which must be repeated thousands of times without the least variation. Nothing worse for intellect can be imagined.

Idiocy and insanity multiply under their influences. In 1840, while the proportion of idiots and insane, to the whole population, was only 1 in 1,100 in the slave States, it was 1 in 900 in all the free States, and as much as 1 in 630 in New England alone. The effects of factory life on health are quite as bad. The cotton factories, the dyeing and bleaching factories, are hotbeds of consumption and disease of the lungs. At Sheffield, a *dry-grinder*, no matter how vigorous his constitution, is never known to live beyond the fated age of thirty-five. In Massachusetts, according to her own statistics, factories shorten the life of the operative one-third! According to the evidence before the committee of the house of commons, it has taken but thirty-two years to change the operatives of Manchester from a race more vigorous than those of New England now are—a well fed, well clothed, moral population—into demoralized, enervated, feeble beings. As one of the witnesses says, “their life has been passed in turning the mule-jenny; their minds have weakened and withered like a tree.” How many years will it require to produce these effects in the north, when the span of man’s life is already so much shortened? The very severity of the labor undermines the constitution. What wears out the human body is not the greatness of any exertion, but its duration. But the spinner has to move silently from one machine to another for twelve or fourteen hours a day, the attention never to flag, the mules never to rest. It has been calculated that the factory girl walks in this way twenty

miles a day ! The system is equally pernicious for the morals. We always find, first, illegitimate births, and then prostitution, as well as drunkenness and crime, increase in great manufacturing districts. How should it be otherwise, when the family is broken up and the factory boarding-house substituted in its place ; when children and girls are separated from their parents at the most critical period of life, crowded in heated work-rooms with a promiscuous herd of strangers, lost to all the conservative influences of home ? In what regard is such a condition of labor superior to southern slavery ? Let the free States begin within their own borders ; let them place their white slaves in as good a condition, moral and physical, as the negroes, and then they may talk to us. The increasing hosts who live by toil in factories, the paupers who belong to the State, and the still greater number who drag out a wretched existence in the crowded haunts of want and vice in their great cities, form more than an offset to anything that can be said of negro slavery. We have no patience with this meddling philanthropy, which does not take the beam out of its own eye before it pulls the mote out of its brother's, at the imminent risk of his eyesight ; whose charity is all for show, and never grows warm except for objects at a distance ; which overlooks want and misery at its own gate, in its eagerness to reform countries it has never seen, and institutions it cannot understand. It is the crying vice of our age ; this desire to attend to everybody's business but our own, to perform any duties but those that lie immediately before us. Instead of making the most of our opportunities, we waste our time in vain wishes that the opportunities were greater. The great duty is to improve, to the utmost of our abilities, the condition in which it has pleased God to place us, and therewith to be content.

But this does not suit the ideas of our northern brethren. They must make anew all the work of creation. Divine Providence instituted the relation of master and slave ; but it is offensive to their finer notions of justice, and inconsistent with that cardinal principle, "that all men are created equal." Therefore they pronounce it "infamous," and "a crime against humanity ;" and it must be abolished, either directly or indirectly, "by preventing its extension, localizing, and discouraging it." The high civilization that accompanies it, all its advantages to both parties must be sacrificed, and both thrown upon the evils of a future that is present in St. Domingo and Jamaica. God instituted marriage ; he decreed "that man and woman should be one flesh, and that the man should be lord over the woman." But our northern philan-

thropists have discovered that this is all wrong; "all men were created equal," therefore the woman shall vote, as in New Jersey; she shall no longer be one with the man, nor shall he be her lord. The wise old common law carried out into practice the Divine institution, and produced the finest race of matrons and maidens the world has ever seen; but the northern lawgivers prefer the law which was the offspring of the corruptions of heathen and imperial Rome; they divide the household into separate interests; the domestic hearth is no longer a common property to the family. The consequences are what they were in Rome—what they are in Italy and Germany and in France, where the illegitimate births are 1 in 15. The sanctity of marriage is gone; it becomes in practice as in theory of law, a mere civil tie.

WISCONSIN.

At the opening of the 19th century, the "territory northwest of the Ohio" was an unbroken wilderness, shared in doubtful supremacy by the aboriginal man, and the other denizens of the forest and prairie.

It were needless to except from the universality of this description the occasional advent of the Indian trader, the nascent settlements on the Ohio, which were attempting a precarious existence, or the military posts which were pushed into this outer domain of our republic, in token of our political dominion, and as heralds of an advancing civilization.

In 1802 the State of Ohio was carved out of the body of the northwest, and admitted into the Federal Union. Steadily advancing in population, wealth, and respectability to its present enviable position in our political system, her brief but impressive history commands the admiration of older communities, and awakens the generous emulation of the new. Her population, in 1850, had reached nearly 2,000,000 souls, and she ranks the third in the sisterhood of States.

The history of Ohio has been the history, in succession, of Indiana, Illinois, and Michigan. Their advance has been, in like manner, rapid in population and in other elements of political greatness. The four States above enumerated contained, in 1850, 4,000,000 of freemen.

Surprising as these results are, transcending all that the world had previously known of the creation of new political communities by the peaceful migration of men and of the arts, distancing even all previous experience in the settlement of the new world, it might seem enough for Wisconsin, the youngest of the creations of the ordinance of '76, to say

that she is of the northwest, and shares with her kindred States in the experience of a like early development.

But to say this is not enough. The settlement of Wisconsin has thus far been on a scale unapproached even by that of the four States above enumerated, and constituting with her the area long familiarly known as the "territory northwest of the Ohio."

That this is not a vain boast is a fact too broadly and familiarly known to need the formality of demonstration. For the satisfaction of the curious, however, there is appended hereto a tabular view of the population of the five States of the northwest, for decades of years, constructed by collating the census returns from 1800 down to 1850.

From this table it appears that during the decade 1840-'50 the population of Wisconsin advanced from 30,000 to 305,000, while at corresponding decades of their growth, Ohio presents the figures from 45,000 to 230,000, Michigan from 31,000 to 212,000, while the corresponding increase of Indiana and Illinois was in a much smaller ratio.

It will be observed that the increase of Wisconsin for the ten years ending in 1850 was 900 per cent. By examination of the census returns of that year, it will be found that the increase of Iowa was 345 per cent; that of Arkansas, 114 per cent.; and of no other State over 100 per cent during the same period.

This migration to Wisconsin, unparalled as it is in the experience of States, has not been the fitful result of the gambling mania which is luring its hordes of victims to the land of gold. It has been the steady and persistent flow of men and capital seeking a permanent home and a profitable investment. After filling up the southern tier of counties, the unbroken tide is setting strongly to the fertile valleys of the Fox and Wisconsin rivers, with their tributaries, and to the Mississippi border.

Wisconsin is no less distinguished in the *character* of its early settlers than in their number. Recklessness and wild adventure has found little place in the history of this migration.

Michigan was fairly open to survey and settlement as early as 1830, and in the course of the succeeding ten years its capabilities were explored and appreciated; during which period its population rose, by a massive immigration, from 31,000 to 212,000.

In 1840 the relations of Wisconsin to the intelligent enterprise of the eastern States were what those of Michigan were ten years earlier. The straits had been passed by sails and

by steam, and the Territory of Wisconsin was open to settlement.

The conviction, however, had fastened itself on the mind of New England and New York that the physical elements of prosperity were more decided and more readily available in Wisconsin, and would work out an earlier maturity, economical and social, than had been realized in the history of other States.

In accordance with these impressions, it is confessedly true that the basis of the social character of Wisconsin has been laid in a migration as distinguished in character as it has been surpassing in numbers. The intellect, the education, and the integrity—the head and the heart—as well as the enterprise, the wealth, the industry, and the skill of New York and New England have been laid broadly and deeply under requisition to furnish out the staple of the population which is to leave its impress on the State for generations to come.

Wisconsin has been equally fortunate in the numbers and the material of her foreign immigration.

The great European movement, which is likely to characterise the latter half of the 19th century, will consist, not so much in the improvement of the forms of social organization at home as in the reproduction of her civilization under greatly improved conditions, by a massive emigration to the new world, whose broad surface of land, still unoccupied, is demanding settlement and cultivation with a voice now familiar to the ear, and attuned to the heart of Europe.

There is a Germany in America which is destined to be greater than the German's fatherland. Ireland is already Cis-Atlantic, and regenerate. The Scandinavian, with a remarkable power of assimilation, touches our shores, and is American in thought, feeling, and language.

From all these sources Wisconsin is deriving large and steady accessions of numbers and of wealth, of enterprise and of cultivated intellect; not of those who drop down by accident within our borders, but of those who leave their native shores with no other intention than to find a home in Wisconsin.

Through those several channels of increase and progress, Wisconsin presented in the year 1850—the *third* of her existence as a sovereign State and a member of our national Union—a population of 305,000 souls, a result absolutely without parallel in the settlement of States.

And it is equally true that the opening of her career as a sovereign State has been from a point of nearer approxima-

tion to the standard of social maturity which prevails on the Atlantic border, and with far less sacrifice of the advantages and refinements of modern civilization than has been true of other new States, whether of the northwest or of other portions of the great valley.

It is, therefore, an interesting question, and one which has attracted attention, public and private, what are the natural capabilities of Wisconsin, which have made so broad and permanent an impression upon the mass of mind at home and abroad, as to bring to her shores so large a portion of the men and the capital that are annually seeking a home and investment in the west? The answer to this inquiry naturally arranges itself under a variety of heads, which will be very briefly considered.

GEOGRAPHICAL POSITION.—The State of Wisconsin comprises most of that portion of the original northwestern territory which lies north of the parallel of latitude $42^{\circ} 30'$, and between Lake Michigan and the Mississippi river, and extending to Lake Superior on the north. A portion of this expanse of territory, lying between Green Bay and Lake Superior and to the north and east of Menomonee and Montreal rivers, is attached to Michigan; and another portion, west and north of the St. Croix and St. Louis rivers, to Minnesota.

The area of Wisconsin, exclusive of the waters of Lake Michigan and Superior, comprises fifty-four thousand square miles, or thirty-five millions of acres.

CLIMATE.—Included between parallels $42^{\circ} 30'$ and 48° north, the climate of Wisconsin is of the same general character with that of New York and New England. The average annual temperature, however, of Wisconsin is not of so low a figure as that of the same parallels on the Atlantic border. The atmosphere is drier, more transparent and salubrious, and the whole area of the State is remarkably free from those causes of endemic disease which were by no means unknown in the settlement of western New York, which have been the misfortune of large portions of Michigan, and the scourge of Indiana, Illinois, Missouri, and, in part, of Iowa. Wisconsin is conceded to be the healthiest of the western States. Its summers are adapted, in temperature and duration, to perfect all the products natural to the latitude, but are not oppressive. Its autumns are proverbially delightful. Its winters are close and uniform, but not harsh or generally severe.

GEOLOGICAL FEATURES, SOIL, &c.—The limestone underlying the coal fields of Illinois forms the immediate basis of the alluvion of southern Wisconsin. This geological district,

in addition to that portion of the State which lies southerly of the valley of the Wisconsin river, comprises the whole of the slope towards Lake Michigan.

In many portions of this district the lime rock disappears, and the out-cropping sandstone furnishes a fine material for building.

The lead-bearing rock of the mineral region is a porous limestone, prevailing throughout Grant, Lafayette, and Iowa counties, comprising four-fifths of the "lead district" of the upper Mississippi; the remaining one-fifth being in the States of Illinois and Iowa.

Deposits of iron ore, water limestone, and beds of gypsum, together with other varieties of minerals, are found in localities more or less numerous throughout the limestone region.

All of that section of the State which lies between Lake Superior on the north and the Falls of St. Anthony on the Mississippi, and the falls of the other rivers flowing southerly, is primitive in its prevailing geological character; and it is within this primitive region that the copper mines of Lake Superior are found—probably the richest in the world, and apparently inexhaustible.

In all that portion of the State lying between the primitive region just described and the limestone formation of the south and east, the transition sandstone prevails; interspersed with limestone and more sparsely with rock of a primitive character. This formation comprises that section of country drained by the Wisconsin and other rivers tributary to the Upper Mississippi and below the falls of those streams. Within this geological district are found quarries of white marble, which promise to be abundant and valuable.

The character of the soil of Wisconsin is, of course, indicated to some extent by its geological features. The limestone district of the State is overspread by a soil and sub-soil similar to that which prevails in other portions of the great valley, and unsurpassed by any in fertility. It is the distinction of the mineral region of Wisconsin that it is overspread by a surface of the very finest agricultural qualities; contrary to the general fact, that a mining district is worthless for the purpose of culture.

Proceeding northerly and westwardly of the dividing ridge between the waters of Lake Michigan and those that flow into the Upper Mississippi, the soil will be observed to become more sandy and porous—a character which will be found to prevail throughout the sandstone region above described. This portion of the State admits of easy cultiva-

tion. The soil is warm and highly productive, and the growth luxuriant.

FACE OF THE COUNTRY, SCENERY, &c.—The surface of Lake Michigan is about six hundred feet above the level of the ocean. The surface of the State is every where undulating; not hilly, much less mountainous. Its average level below latitude 46° is about 250 feet above Lake Michigan; seldom falling so low as 100 feet, and rarely rising above 400 feet. The highest of the blue mounds, on the line between the counties of Dane and Iowa, rises 1,170 feet above Lake Michigan, and is perhaps the most elevated land in Wisconsin.

There is a remarkable depression in the surface of the country, running across the State, from Green Bay to the Mississippi, the bottom of which furnishes the channels of the Fox and the lower Wisconsin. The portage between these two rivers is less than two miles.

This portage is but 223 feet above the level of Lake Michigan; being the elevation of the dividing ridge, at this point, between the basin of the lakes and the valley of the Mississippi. At the mouth of the Wisconsin, the western terminus of this depression is about 60 feet above Lake Michigan; that of Lake Winnebago, at the head of the rapids of the Fox, being 160 feet.

From the north into this valley flow the upper Wisconsin and the Wolf, and on the south the country rises to the level of the head waters of the Rock, 316 feet above the surface of Lake Michigan. Thence there is a gradual inclination of the surface southerly to the line of the State; the elevation of which, at the egress of the Rock, is 128 feet above the lake.

It is characteristic of the State that the streams uniformly flow in beds but very slightly depressed below the general level of the adjacent country, and present no difficulty in the way of the construction of roads of easy grade, transversely, as well as in the line of the water courses. There is also, from this cause, much less to be apprehended from the sudden and destructive swell of the volume of water from copious rains—two considerations which they know best how to appreciate who have dwelt where rivers and their branches make their beds in deep vallies, while the general elevation of the country is but a succession of intervening ridges.

Such being a general description of the surface of Wisconsin, the immigrant will not look for Alpine scenery, or the bolder and sublimer features of the country of high mountain and deep valley. But in all that constitutes the beauty of the landscape, whether in the vestments of nature, or in

those capabilities which cultivation can alone develop, Wisconsin is without a rival. Among her ten thousand undulations there is scarcely one which lifts its crown above its fellows which does not disclose to the prophetic eye of taste a possible Eden, a vision of loveliness which time and the hand of cultivation will not fail to realize and to verify.

The only forests of a growth approximating towards that of western New York, Pennsylvania, and northern Ohio, are found in a small portion of the Rock river valley, and in a narrow border on Lake Michigan, widening as it is traced northerly; evergreens becoming more freely interspersed, and finally predominating.

The evergreen growth prevails in the vallies of the streams of the sand-stone district. The most extensive pinery in the State is found on the upper Wisconsin. The same valuable growth prevails in the valleys of the Wolf, the La Crosse, the Black, the Chippewa, the St. Croix, and other streams penetrating the stone region.

Aside from these localities and the primitive region of Lake Superior, the elements of the Wisconsin landscape are rolling prairie, the sparse woodland, the opening, the natural meadow, and the lake. These, in their infinite variety of combination, and in their unrivalled loveliness, make up the natural scenery of the State. Three hundred and fifty thousand souls have, in a day, as it were, found a happy home in Wisconsin. But her millions of acres, equally beautiful, and all untouched, are still courting the hand of cultivation, and the adornings of art.

EDUCATION.—The bounty of Congress has set apart the 16th section of every township in the State for the support and maintenance of common schools. From this source nearly 1,000,000 acres will accrue to the State, the proceeds of the sales of which are to constitute a permanent fund, the income of which is to be annually devoted to the great purpose of the grant.

This magnificent foundation has been wisely enlarged by constitutional provisions, giving the same direction to the donation of 500,000 acres, under the act of 1841, and the five per cent. reserved on all sales of government lands within the State. A still larger addition will accrue from the grant of the swamp and overflowed lands, which the settlement of the country, the lapse of time, and easy processes of reclamation, will convert into the best meadow land in the world, and a large portion, ultimately, into arable.

For the support of a State university, seventy-two sections of choice land, comprising 46,080 acres, have been already

granted, and it is not improbable that this provision may be also enlarged by subsequent grants. If these trusts are administered with ordinary wisdom, the educational funds of Wisconsin cannot be less, ultimately, than \$3,000,000, and may reach \$5,000,000.

The university is already chartered and in successful operation. The school system has been wisely designed, and the progress of organization, under the law, keeps pace with the progress of settlement. There are already not far from two thousand five hundred school districts in the State. The annual income to be divided has already reached \$70,000, and will be greatly increased from year to year.

The system contemplates, by the introduction of union schools, to extend academic instruction to each town in the State.

In addition to this munificent public provision for common and liberal education, there are, in different parts of the State, educational incorporations, both academic and collegiate, founded on private subscription. The most promising of these are the college at Beloit, well endowed and in successful operation; and similar institutions at Milwaukee, Racine, and Waukesha in eastern Wisconsin, and at Appleton in the north.

Indeed, in none of the new States, even in the northwest, will the means of education be more ample; and in none is there a more rational appreciation of the importance of this paramount public interest.

In Wisconsin, as in the other States of this Union, there is, and ever will be, an entire freedom of ecclesiastical organization, and an equal protection of every religious institution and arrangement, conservative of good morals, and protective of the highest and most enduring interests of man.

In consideration of all these elements of prosperity, economical and social, such as have never, till now, gathered around the opening career of a new political community, there is little ground for wonder that the early growth of Wisconsin has been without a parallel in the history of States; and it may be very safely assumed that the advent of men and capital to that favored portion of the northwest will continue, in increasing volume, for many years to come.

MINING.—To the practical miner, as capitalist or operative, *the lead region of the upper Mississippi offers the most substantial inducements to settlement.* The exceeding abundance and richness of the mineral, the comparative ease with which it may be mined, and the high price it commands the moment it is brought to the surface, open to the industrious and prudent operator a highway to wealth.

New *leads* of the richest promise have been recently discovered in the mineral district, and an increasing emigration to that State promises to replace the California draft, and to meet the growing demand for the mineral.

The steady advance in the price of lead which has prevailed for five years past is indicative of a gradual but decided extension of its uses in the arts. There is no ground for apprehension that the supply will outrun the demand, or be able to work a reduction of the wages of labor and profits of capital in this industrial occupation for some years to come.

The copper mines of Lake Superior are of established celebrity throughout the world, and open an inviting field for enterprise. The mining interest in that region is fast losing its character of adventure, and is attracting the attention of the prudent capitalist and the practical miner, as a remunerative branch of business.

The iron mines of Wisconsin have not yet been opened to any extent, but are worthy of the attention of the immigrant. There are rich localities of ore near the head-waters of the Rock, and on the upper Mississippi and its branches.

LUMBERING.—To the lumberman the pineries of Wisconsin present inducements for investment and settlement which can be hardly overrated. That of the upper Wisconsin and its tributaries is the most extensive, and distinguished still more for the fine quality than the inexhaustible quantities of its timber. The other localities of the white pine and other evergreens are mainly on the Wolf, the great northern affluent of the Fox, and on the LaCrosse, the Black, and the St. Croix branches of the upper Mississippi.

The rapids of these streams furnish abundant water power for the manufacture of lumber, and on the annual spring rise, and occasional freshets at other seasons of the year, the yield of the mills is floated from the Wolf into Lake Winnebago and the lower Fox, and from the other streams into the Mississippi.

Scarcely ten years have elapsed since the Alleghany pine of western New York and Pennsylvania had undisputed possession of the market, not only of the Ohio valley, but of the Mississippi and its tributaries above New Orleans, at which point it competed with the lumber of Maine and New Brunswick.

The course of the lumber trade may now be considered as permanently changed. The pineries of Wisconsin now control and will soon hold exclusive possession of the market of the valleys of the Mississippi and its great western affluents.

AGRICULTURE.—But it is to that great body of emigrants who are seeking a home in the west, as cultivators of the soil,

that the natural capabilities of Wisconsin most of all address themselves.

The prairies of Wisconsin, unlike those of Illinois, Missouri, Iowa, and Minnesota, are none of them extensive, and are so skirted and belted by timber as to be adapted to immediate and profitable occupation and improvement to their very centre.

The openings, which comprise a large portion of the finest land of Wisconsin, owe their present condition to the action of the annual fires, which have kept under all other forest growth except those varieties of oak which can withstand the sweep of that element.

This annual burning of an exuberant growth of grass and of under-brush has been adding, perhaps for ages, to the productive power of the soil, and preparing it for the ploughshare, without the life-long process which was necessary to bring the densely timbered lands of Ohio to the same advanced point of preparation for immediate and profitable cultivation.

It is the great fact, that nature has thus "cleared up" Wisconsin to the hand of the settler, and enriched it by yearly burnings, and has at the same time left sufficient timber on the ground for fence and firewood, that explains in a great measure the capacity it has exhibited, and is now exhibiting, for rapid settlement and early maturity.

There is another fact important to be noticed in this connexion. The low level prairie, or natural prairie, of moderate extent, is so generally distributed over the face of the country that a settler on a fine section of arable land finds on his own farm, or its immediate neighborhood, abundant pasturage for his stock in summer on the open range, and hay for the winter for the cutting, the bounty of nature supplying his need in this behalf till the cultivated grasses may be introduced and become sufficient for his use.

It is this very rapid transition of a quarter section of government land into an *old farm*, without a tith of the privations and hardships which hung around the lifetime of the early pioneers of Ohio, which distinguishes the early settlement of Wisconsin.

Every description of husbandry suitable to the latitude may be successfully prosecuted. In addition to the usual routine of crops, the business of stock-raising, of dairy, of wool-growing, and the culture of flax, are beginning to engage the attention of settlers, with promise of eminent success.

The steady and exclusive prosecution of agriculture on the fertile soil of the mineral district has the advantage of an active home market and ready pay. Hitherto, in consequence

of the tempting and absorbing nature of the mining business, the cultivation of the soil has given place to "prospecting" for mineral. Agricultural lands, therefore, though of the very first order of fertility, have been neglected, and may be purchased at very low rates.

The same general remarks apply to the agricultural lands in the pineries. Though of different elements from the soil which prevails in the limestone region, it is easily worked, and of undoubted productive power. The home market is still more importunate in its demands, and as promptly remunerative.

And of the millions of acres comprised in the area of Wisconsin, by far the greatest portion may still be entered at the land offices at \$1 25 per acre, paid down, in specie, or in land warrants.

Several hundred thousand acres of school lands in the older counties are now open to entry at their appraised value at the office of the Secretary of State at the capitol in Madison; one-tenth of the purchase money down, and the residue on a long credit at seven per cent. per annum.

Choice lands, located for the maintenance of the State university, may also be entered at their appraised value, at the office of the Secretary of State, on even better terms of payment than the school lands.

It is worth while to add, that the California emigration, and other temporary causes, have thrown in market, at reduced prices, many improved farms in choice locations in the older counties. The opportunity for investment thus offered is worthy of the attention of the emigrant; and facts relative thereto may be easily ascertained on inquiry at private land offices in the largest towns in the State.

MANUFACTURES.—The artizan will find a fair field for his labor and for the employment of capital in Wisconsin.

For the ordinary mechanic arts, which are inseparable from agricultural thrift anywhere, the demand is importunate. Builders of every class and degree are liberally paid in the larger towns. Millwrights are sure to find employment in town or country, whether the mill power be water or steam. Carriage making, from the manufacture of the railroad car to the simple vehicle, whether useful or tasteful, is greatly in demand, and cannot fail to do well.

Among the larger operations of manufacture, those of flour and lumber are becoming sources of profit to the capitalist and laborer, and beneficial to the farmer. Woollen, flax, and cotton mills must soon become fixed facts in Wisconsin. The raw material for the two former will soon be among the larger and more profitable home productions of her agriculture,

while the supply of cotton will, through the channel of the Mississippi, be more direct, safe, and easy than by sea to towns on the Atlantic border. For all these operations there is abundant water power in suitable locations.

For the construction of steamboats, and every variety of lake craft, the western coast of Lake Michigan is eminently adapted; and it may be reasonably anticipated that a large share of the ship and boat building for these inland waters will be done in the ports on that shore. The iron and lumber of northwestern Wisconsin will attract to that quarter much of the boat building for the Mississippi and its branches.

Nor is it to be presumed that Wisconsin will be long tributary to Buffalo or Pittsburg for its engines, whether for the steamer, the locomotive, or the mill. No point on the lake presents more advantages than Milwaukee for foundries, for castings and machinery of every description.

All these, and the thousand unenumerated arts which go to constitute the social maturity of a State, will be hospitably entertained, and meet with an early development in Wisconsin.

TRADE.—Bordered on the east and the west, throughout its entire length, by Lake Michigan on the one hand and the Mississippi on the other, every portion of the State has easy access to the ocean, and a complete command of the eastern and southern markets—an advantage which will be appreciated by those who are acquainted with the mutations, as well as the fixed laws of trade.

On the Michigan side have sprung up the towns Milwaukee, Racine, Kenosha, Ozaukee, Manitowoc, Sheboygan, and Green Bay, all flourishing and promising.

The growth of Milwaukee, like that of the State of which it is the commercial mart, has been unexampled in the history of American cities. Scarcely visited by the white man in 1835, it has now (1852) a population of twenty-five thousand souls.

On the Mississippi border the elements of wealth, bountiful as nature has been, have scarcely begun to be developed; and the question is still open as to the position of its principle commercial mart. The more prominent points at present are Potosi, Prairie du Chien, Prairie La Crosse, and Willow river.

Of the interior towns, there are in the lead district Mineral Point and Platteville; in the basin of the Fox and Lower Wisconsin, Fort Winnebago, Oshkosh, Fond du Lac, and Menasha; on the banks of the Rock, Watertown, Janesville, and Beloit; between the Rock and Lake Michigan, White-water and Waukesha.

Madison, the capital of the State, the seat of justice of Dane county, and the seat of the university, is beautifully located in the basin of the four lakes, midway between Lake Michigan and the Mississippi.

Janesville, the most populous of the interior towns, is the seat of the State institution for the education of the blind.

The population of the villages of the interior above enumerated ranges from twelve hundred to four thousand each. The list of towns might be greatly enlarged, did it fall within the scope of this article to do more than to present to the emigrant a general view of the natural capabilities, and the present aspects of Wisconsin.

All around is in rapid, though unequal progression, and the town unenumerated to-day may take its place in the first class to-morrow.

INTERNAL IMPROVEMENTS.—Plank roads are in process of construction, connecting the leading towns of the interior with each other; and all with the lake and the river. Most of the towns on Lake Michigan are penetrating the interior with the facilities of trade and intercourse, to the mutual advantage of themselves and the country.

Of the several railroads projected and chartered, most of which are destined to completion at an early day, two—the Milwaukee and Mississippi, and the Rock River Valley roads—are already under progress.

Cars are already running over the track of the former, from Milwaukee to Eagle Prairie, nearly forty miles. It will be finished to Rock river this season, and to the Wisconsin during the summer of 1853. Another year will carry it through to the Mississippi. The track is laid with heavy T rail, and the road, with all its appurtenances, will be a work of the first class. This road will pass through Madison, the capital of the State, and terminate at or near the mouth of the Wisconsin.

The Rock River Valley road, connecting Fond du Lac with Janesville, and to be ultimately extended to Chicago, has been commenced simultaneously at Fond du Lac and Janesville. Several miles have been graded, and are nearly ready for the rail.

A road has been chartered to run from Fort Winnebago, through Madison and Janesville, to Beloit; there to connect with a branch from the Chicago and Galena road; thus furnishing a continuous route from the valley of the Fox and Wisconsin, through the capital of the State, to Chicago. This route is attracting the attention of capitalists; and the business of the country demands and will effect the early construction of the road, by means of which a continuous

line of railroad travel to the Atlantic will be secured to central Wisconsin.

The lake shore road from Milwaukee, through Racine and Kenosha, to Chicago, is an enterprise of general interest, and the construction of it cannot be long deferred.

Other railroads to intersect the State in various directions, either new routes or extensions of old ones, are projected. Some of these, doubtless, will be carried through, though the period of their completion is more distant than that of those aboved named.

The State is now in the administration of a large trust fund, derived from the sales of lands granted by Congress for the construction of a steamboat communication from Green Bay to the Mississippi, along the bed of the Fox and Wisconsin rivers. This great work, when completed, is destined to form an important and valuable water communication between the basin of the St. Lawrence and the great valley of the Mississippi. Once completed, heavy freight between St. Louis and New York will inevitably seek this channel, in preference to that by the Illinois and Michigan canal, as now it seeks the latter in preference to the eastern routes.

This great work, furnishing the most capacious outlet from our MEDITERRANEAN RIVER into our inland seas, and thence through the enlarged Erie canal and the Hudson into the Atlantic, will be completed at no very distant day.

The improvement of the harbors on Lake Michigan is imperiously demanded at the hands of the general government, and in the existing condition of the treasury cannot be longer delayed. And manifestly no object of expenditure could be more eminently national than the improvement of the outlet of Lake Superior, affording to the ordinary lake navigation free access to the copper region of northern Michigan and Wisconsin.

In connexion with the subject of works of general utility, it remains only to say that the telegraphic wires made early entry into Wisconsin. The line from Chicago to Milwaukee, and thence to Madison and Galena, has been for some years in operation. A net work of wires now overspreads the State, and all the larger towns are brought into the circuit of instantaneous communication, and into enjoyment of the advantages of this commerce of thought and feeling.

It need hardly be said, in conclusion, that these evidences of social advancement which meet the immigrant on his arrival in Wisconsin, and rapidly gather around the settler in his new home, contrast cheerfully and hopefully with the privation, the hardship, the toil and the danger which fifty years ago environed the pioneer in the forests of Ohio.

Indeed, looking at the fact that nature has prepared the soil of Wisconsin for the plough, and its herbage for the immediate sustenance of domestic animals, contemplating the appliances of civilization, which art brings to the very doors of his cabin, he will not doubt—as in truth he need not—that twenty years will do for Wisconsin what fifty years has barely sufficed to do for Ohio; that in all that goes to constitute a healthy and refined civilization Wisconsin is destined to a more rapid development and an earlier maturity than has heretofore marked the history of States under the most favorable conditions.

These views are not extravagant. They are conclusions fully warranted by the premises. The predictions of to-day will be sober history in 1872.

POPULATION OF WISCONSIN.

Counties.	1840.	1842.	1846.	1847.	1850.
Adams					187
Brown	2,107	2,146	2,662	2,914	6,222
Calumet	275	407	836	1,060	1,746
Chippewa					615
Columbia			1,969	3,791	9,565
Crawford	1,503	1,449	1,444	1,409	2,399
Dane	314	776	8,289	10,935	16,654
Dodge	67	149	7,787	14,905	19,140
Fond du Lac	139	295	3,544	7,459	14,512
Grant	3,926	5,937	12,034	11,720	16,169
Green	933	1,594	4,758	6,487	8,583
Iowa and Richland	3,978	5,029	14,906	7,963	10,479
Jefferson	914	1,638	8,680	11,464	15,339
Kenosha					10,730
La Fayette				9,335	11,556
La Pointe				367	595
Manitowoc	235	263	629	1,285	3,713
Marathon					466
Marquette	18	59	986	2,261	8,642
Milwaukee	5,605	9,565	15,922	22,791	31,119
Portage	1,623	646	931	1,504	1,267
Racine	3,475	6,318	17,983	19,538	14,971
Richland					903
Rock	1,701	2,867	12,405	14,720	30,717
Saint Croix			1,419	1,674	624
Sauk	102	393	1,003	2,178	4,372
Sheboygan	133	227	1,637	5,580	8,386
Walworth	2,611	4,618	13,439	15,039	17,866
Washington	343	965	7,473	15,447	19,476
Waukesha			13,793	15,866	19,324
Winnebago	135	143	732	2,748	10,167
Total	30,945	44,478	155,277	210,546	305,566

From the above census returns it will be seen that the population of Wisconsin has increased in greater ratio than any other State in the Union. The population at this date, May, 1855, can be safely estimated at 450 or 500,000.

ORGANIZATION OF THE EXECUTIVE DEPARTMENTS OF THE GOVERNMENT OF THE UNITED STATES.

The annexed description of the organization and business of the different departments of the government, which has been published in the official paper, may be of use to persons having business in any of the departments, and will be interesting to those in every part of the Union who have business at the capital, or desire to understand the machinery of the government:

DEPARTMENT OF STATE.

The whole machinery employed to conduct the business arising out of our foreign relations with all the powers of the world is far more simple than is generally conceived. The number employed in the Department of State of the United States is only seventeen, as follows: One Secretary of State, (Hon. William L. Marcy,) one Assistant Secretary of State, one chief clerk, twelve clerks, one translator, and one librarian.

Diplomatic Branch.—This branch of the State Department has charge of all correspondence between the department and other diplomatic agents of the United States abroad and those of foreign powers accredited to this government. In it all diplomatic instructions sent from the department, and communications to commissioners under treaties of boundaries, &c., are prepared, copied and recorded; and all of like character received are registered and filed, their contents being first entered in an analytic table or index.

Consular Branch.—This branch has charge of the correspondence, &c., between the department and the consuls and commercial agents of the United States. In it instructions to those officers, and answers to their dispatches and to letters from other persons asking for consular agency, or relating to consular affairs, are prepared and recorded.

The Disbursing Agent.—He has charge of all correspondence and other matters connected with accounts relating to any fund with the disbursement of which the department is charged.

The Translator.—His duties are to furnish such translations as the department may require. He also records the commissions of consuls and vice-consuls, when not in English, upon which exequaturs are issued.

Clerk of Appointments and Commissions.—He makes out and records commissions, letters of appointment, and nominations to the Senate; makes out and records exequaturs,

and records, when in English, the commissions on which they are issued. Has charge of the library.

Clerk of the Rolls and Archives.—He takes charge of the rolls or enrolled acts and resolutions of Congress, as they are received at the department from the President; prepares the authenticated copies thereof which are called for; prepares for and superintends their publication, and that of treaties, in the newspapers and in book form; attends to their distribution throughout the United States, and that of all documents and publications in regard to which this duty is assigned to the department; writing and answering all letters connected therewith. Has charge of all Indian treaties and business relating thereto.

Clerk of Authentications and Copyrights.—He has charge of the seals of the United States and of the department, and prepares and attaches certificates to papers presented for authentication; receives and accounts for the fees. Has charge of publications transmitted to the department under the laws relating to copyrights; records and indexes their titles; records all letters from the department other than the diplomatic and consular.

Clerk of Pardons and Passports.—He prepares and records pardons and remissions, and registers and files the petitions and papers on which they are founded. Makes out and records passports; keeps a daily register of all letters other than diplomatic and consular received, and of the disposition made of them.

ATTORNEY GENERAL'S OFFICE.

Hon. Caleb Cushing, Attorney General of the United States; R. H. Gillet, esq., chief clerk. The ordinary business of this office may be classified under the following heads:

1. Official opinions on the current business of the government, as called for by the President, by any head of department, or by the Solicitor of the Treasury.
2. Examination of the titles of all land purchased, as the sites of arsenals, custom-houses, light-houses, and all other public works of the United States.
3. Applications for pardons in all cases of conviction in the courts of the United States.
4. Applications for appointment in all the judicial and legal business of the government.
5. The conduct and argument of all suits in the Supreme Court of the United States in which the government is concerned.

To these ordinary heads of the business of the office are added at the present time the following, viz:

First. The direction of all appeals on land claims in California.

Second. The codification and revision of the laws of the District of Columbia.

INTERIOR DEPARTMENT.

Secretary of the Interior Department, Hon. Robert McClelland, of the State of Michigan. Its clerical force consists of one chief clerk, (George C. Whiting, esq.,) one disbursing agent, and ten other regular clerks; and to its supervision and management are committed the following branches of the public service:

1st. *The Public Lands*.—The chief of this bureau is called the "Commissioner of the General Land Office." The Land Bureau is charged with the survey, management, and sale of the public domain, and the issuing of titles therefor, whether derived from confirmations of grants made by former governments, by sales, donations, or grants for schools, military bounties, or public improvements, and likewise the revision of Virginia military bounty land claims, and the issuing of scrip in lieu thereof. The Land Office also audits its own accounts. The present Commissioner is Mr. John Wilson, of the District of Columbia. Its principal officers are a recorder, chief or principal clerk of public lands, principal clerk of private land claims, and principal clerk of surveys, all of whom are appointed by the President and confirmed by the Senate, besides a draughtsman, assistant draughtsman, and some 106 clerks of various grades.

2d. *Pensions*.—The present head of this bureau is the Hon. Lorin P. Waldo, of Connecticut. The Commissioner is charged with the examination and adjudication of all claims arising under the various and numerous laws passed by Congress granting bounty lands or pensions for military or naval services in the revolutionary and subsequent wars in which the United States have been engaged. He has one chief clerk, (S. Cole, esq.,) and a permanent corps consisting of some seventy other clerks, to which Congress, to enable him to meet the extraordinary requirements of the new bounty land law, has added a temporary force of about fifty clerkships of different denominations.

3d. *Indians*.—Commissioner of Indian Affairs, Hon. George W. Manypenny, of Ohio. He is provided with a chief clerk and about fifteen other subordinate clerks.

4th. *Patent Office*.—To this bureau is committed the execu-

tion and performance of all "acts and things touching and respecting the granting and issuing of patents for new and useful discoveries, inventions, and improvements;" the collection of statistics relating to agriculture; the collection and distribution of seeds, plants, and cuttings. It has a chief clerk—who is by law (as at the present time) the Acting Commissioner of Patents in the absence of the Commissioner—ten principal and ten assistant examiners of patents, besides some dozen other subordinate permanent clerks.

Besides these four principal branches of this new executive department, the organic act of 1849 transferred to it from the Treasury Department the supervision of the accounts of the United States marshals and attorneys and the clerks of the United States courts; the management of the lead and other mines of the United States, and the affairs of the penitentiary of the United States in the District of Columbia; and from the State Department the duty of taking and returning the censuses of the United States, and of supervising and directing the acts of the Commissioner of Public Buildings. By recent acts of Congress, also, the hospital for the insane of the army and navy and of the District of Columbia is under the management of this department; and, by assignment from the President, it has added to its long list of duties the survey and demarcation of the unsettled boundary lines between the States and Territories and bordering nations.

This department is at present very inconveniently separated and located, and should be appropriately and permanently provided for. The Secretary's office occupies a portion of the new Patent Office building, the General Land Office a portion of the Treasury building, and the Pension Office a portion of "Winder's building," now the property of the government, whilst the Indian Office is located in premises not fire-proof and rented of their private owners.*

TREASURY DEPARTMENT.

The Treasury Department consists of the offices of the Secretary of the Treasury, two comptrollers, commissioner of the customs, six auditors, treasurer, register, solicitor, lighthouse board, and coast survey.

The following is a brief indication of the duties of these several offices and of the force employed therein respectively:

Secretary's Office.—Hon. James Guthrie, Secretary of the Treasury; Hon. P. G. Washington, Assistant Secretary; one engineer in charge; one architect and three draughtsmen temporarily employed, and twenty-three clerks. The Secre-

* The Census Office, when existing, is attached to this department.

tary of the Treasury is charged with the general supervision of the fiscal transactions of the government, and of the execution of the laws concerning the commerce and navigation of the United States. He superintends the survey of the coast, the light-house establishment, the marine hospitals of the United States, and the construction of certain public buildings for custom-houses and other purposes.

First Comptroller's Office.—Elisha Whittlesey, esq., Comptroller, and fifteen clerks. He prescribes the mode of keeping and rendering accounts for the civil and diplomatic service as well as the public lands, and revises and certifies the balances arising thereon.

Second Comptroller's Office.—John M. Brodhead, esq., Comptroller, and seventeen clerks. He prescribes the mode of keeping and rendering the accounts of the army, navy, and Indian departments of the public service, and revises and certifies the balances arising thereon.

Office of the Commissioner of the Customs.—Hugh J. Anderson, esq., Commissioner, and eleven clerks. He prescribes the mode of keeping and rendering the accounts of the customs revenue and disbursements, and for the building and repairing custom-houses, &c., and revises and certifies the balances arising thereon.

First Auditor's Office.—Thomas L. Smith, esq., First Auditor, and nineteen clerks. He receives and adjusts the accounts of the customs revenue and disbursements, appropriations and expenditures on account of the civil list and under private acts of Congress, and reports the balances to the Commissioner of the Customs and the First Comptroller, respectively, for their decision thereon.

Second Auditor's Office.—Philip Clayton, esq., Second Auditor, and twenty-one clerks. He receives and adjusts all accounts relating to the pay, clothing, and recruiting of the army, as well as armories, arsenals, ordinance, and all accounts relating to the Indian department, and reports the balances to the Second Comptroller for his decision thereon.

Third Auditor's Office.—Robert J. Atkins, esq., Third Auditor, and seventy-eight clerks. He receives and adjusts all accounts for subsistence of the army, fortifications, military academy, military roads, and the quartermaster's department, as well as for pensions, claims arising from military services previous to 1816, and for horses and other property lost in the military service, under various acts of Congress, and reports the balances to the Second Comptroller for his decision thereon.

Fourth Auditor's Office.—Aaron O. Dayton, esq., Fourth Auditor, and sixteen clerks. He receives and adjusts all

accounts for the service of the Navy Department, and reports the balances to the Second Comptroller for his decision thereon.

Fifth Auditor's Office.—Josiah Minot, esq., Fifth Auditor, and six clerks. He receives and adjusts all accounts for diplomatic and similar services performed under the direction of the State Department, and reports the balances to the First Comptroller for his decision thereon.

Sixth Auditor's Office.—William F. Phillips, esq., Sixth Auditor, and one hundred and one clerks. He receives and adjusts all accounts arising from the service of the Post Office Department. His decisions are final, unless an appeal be taken in twelve months to the First Comptroller; and he superintends the collection of all debts due the Post Office Department.

Treasurer's Office.—Samuel Casey, esq., Treasurer, and thirteen clerks. He receives and keeps the moneys of the United States in his own office, and that of the depositories created by the act of the 6th of August, 1846, and pays out the same upon warrants drawn by the Secretary of the Treasury, countersigned by the First Comptroller, and upon warrants drawn by the Postmaster General and countersigned by the Sixth Auditor and recorded by the Register. He also holds public moneys advanced by warrant to disbursing officers, and pays out the same upon their checks.

Register's Office.—Finley Bigger, register, and twenty-nine clerks. He keeps the accounts of public receipts and expenditures; receives the returns and makes out the official statement of commerce and navigation of the United States; and receives from the First Comptroller and Commissioner of Customs all accounts and vouchers decided by them, and is charged by law with their safe-keeping.

Solicitor's Office.—Francis B. Streeter, Solicitor, and six clerks. He superintends all civil suits commenced by the United States, and instructs the United States attorneys, marshals, and clerks in all matters relating to them and their results. He receives returns from each term of the United States courts, showing the progress and condition of such suits; has charge of all lands and other property assigned to the United States in payment of debts, and has power to sell and dispose of the same for the benefit of the United States.

Lighthouse Board.—Hon. James Guthrie, president; Com. W. B. Shubrick, U. S. navy, chairman; Gen. J. G. Totten, U. S. army; Col. James Kearney, U. S. army; Prof. A. D. Bache, Superintendent of Coast Survey; Prof. Joseph Henry, Secretary of Smithsonian Institution; Commander

S. F. Dupont, U. S. navy; Lieut. Thornton A. Jenkins, U. S. navy, secretary; Capt. E. L. F. Hardcastle, U. S. army, secretary, and five clerks. This board directs the building and repairing of light-houses, light-vessels, buoys, and beacons, contracts for supplies of oil, &c.

Coast Survey.—Alex. D. Bache, esq., superintendent, and thirty-eight assistant draughtsmen, &c.

NAVY DEPARTMENT.

The Navy Department consists of the Navy Department proper, being the office of the Secretary and of five bureaus attached thereto, viz: Bureau of Navy Yards and Docks, Bureau of Construction, Equipment, and Repair, Bureau of Provisions and Clothing, Bureau of Ordnance and Hydrography, and the Bureau of Medicine and Surgery. The following is a statement of the duties of each of these offices and of the force employed therein:

Secretary's Office.—Hon. James C. Dobbin, Secretary of the Navy; Charles W. Welsh, esq., chief clerk, and eleven clerks. The Secretary of the Navy has charge of every thing connected with the naval establishment, and the execution of all laws relating thereto is entrusted to him, under the general direction of the President of the United States, who, by the Constitution, is commander-in-chief of the army and navy. All instructions to commanders of squadrons and commanders of vessels, all orders of officers, commissions of officers both in the navy and marine corps, appointments of commissioned and warrant officers, orders for the enlistment and discharge of seamen, emanate from the Secretary's office. All the duties of the different bureaus are performed under the authority of the Secretary, and their orders are considered as emanating from him. The general superintendence of the marine corps forms also a part of the duties of the Secretary, and all the orders of the commandant of that corps should be approved by him.

Bureau of Navy Yards and Docks.—Commodore Joseph Smith, chief of the bureau, four clerks, one civil engineer, and one draughtsman. All the navy yards, docks, and wharves, buildings and machinery in navy yards, and every thing immediately connected with them, are under the superintendence of this bureau.

Bureau of Construction, Equipment, and Repair.—John Lenthall, esq., chief of the bureau, eight clerks, and one draughtsman. The office of the engineer-in-chief of the navy, Daniel B. Martin, esq., is attached to this bureau, who is assisted by three assistant engineers. This bureau has

charge of the building and repairs of all vessels-of-war, purchase of materials, and the providing of all vessels with their equipments, as sails, anchors, water-tanks, &c. The engineer-in-chief superintends the construction of all marine steam-engines for the navy, and, with the approval of the Secretary, decides upon plans for their construction.

Bureau of Provisions and Clothing.—H. Bridge, purser United States navy, chief of bureau, and four clerks. All provisions for the use of the navy, and clothing, together with the making of contracts for furnishing the same, come under the charge of this bureau.

Bureau of Ordnance and Hydrography.—Commodore Charles Morris, chief of bureau, four clerks, and one draughtsman. This bureau has charge of all ordnance and ordnance stores, the manufacture or purchase of cannon, guns, powder, shot, shells, &c., and the equipment of vessels-of-war, with everything connected therewith. It also provides them with maps, charts, chronometers, barometers, &c., together with such books as are furnished ships-of-war. "The United States Naval Observatory and Hydrographical Office" at Washington and the Naval Academy at Annapolis are also under the general superintendence of the chief of this bureau.

Bureau of Medicine and Surgery.—Dr. William Whelan, surgeon United States navy, chief of bureau, one passed assistant surgeon United States navy, and two clerks. Everything relating to medicines and medical stores, treatment of sick and wounded, and management of hospitals, comes within the superintendence of this bureau.

POST OFFICE DEPARTMENT.

Hon. James Campbell, Postmaster General. The direction and management of the Post Office Department are assigned by the Constitution and laws to the Postmaster General. That its business may be the more conveniently arranged and prepared for his final action, it is distributed among several bureaus, as follows: The Appointment Office, in charge of the First Assistant Postmaster General; the Contract Office, in charge of the Second Assistant Postmaster General; the Finance Office, in charge of the Third Assistant Postmaster General; and the Inspection Office, in charge of the chief clerk.

Appointment Office.—Horatio King, esq., First Assistant Postmaster General, and nineteen clerks. To this office are assigned all questions which relate to the establishment and discontinuance of post offices, changes of sites and names, appointment and removal of postmasters and route and local

agents, as also the giving of instructions to postmasters. Postmasters are furnished with marking and rating stamps and letter balances by this bureau, which is charged also with providing blanks and stationery for the use of the department, and with the superintendence of the several agencies established for supplying postmasters with blanks. To this bureau is likewise assigned the supervision of the ocean mail steamship lines, and of the foreign and international postal arrangements.

Contract Office.—William H. Dundas, esq., Second Assistant Postmaster General, and twenty-six clerks. To this office is assigned the business of arranging the mail service of the United States, and placing the same under contract, embracing all correspondence and proceedings respecting the frequency of trips, mode of conveyance, and times of departures and arrivals on all the routes; the course of the mail between the different sections of the country, the points of mail distribution, and the regulations for the government of the domestic mail service of the United States. It prepares the advertisements for mail proposals, receives the bids, and takes charge of the annual and occasional mail lettings and the adjustment and execution of the contracts. All applications for the establishment or alteration of mail arrangements and the appointment of mail messengers should be sent to this office. All claims should be submitted to it for transportation service not under contract, as the recognition of said service is first to be obtained through the contract office as a necessary authority for the proper credits at the Auditor's office. From this office all postmasters at the ends of the routes receive the statement of mail arrangements prescribed for the respective routes. It reports weekly to the Auditor all contracts executed and all orders affecting accounts for mail transportation; prepares the statistical exhibits of the mail service and the reports of the mail lettings, giving a statement of each bid; also of the contracts made, the new service originated, the curtailments ordered, and the additional allowances granted within the year.

Finance Office.—John Marron, esq., Third Assistant Postmaster General, and twenty-one clerks. To this office are assigned the supervision and management of the financial business of the department not devolved by law upon the Auditor, embracing accounts with the draft offices and other depositories of the department, the issuing of warrants and drafts in payment of balances reported by the Auditor to be due to mail contractors and other persons, the supervision of the accounts of offices under orders to deposit their quarterly

balances at designated points, and the superintendence of the rendition by postmasters of their quarterly returns of postages. It has charge of the dead-letter office, of the issuing of postage stamps and stamped envelopes for the pre-payment of postage, and of the accounts connected therewith.

To the Third Assistant Postmaster General all postmasters should direct their quarterly returns of postage; those at draft offices, their letters reporting quarterly the nett proceeds of their offices, and those at depositing offices their certificates of deposit. To him should also be directed the weekly and monthly returns of the depositories of the department, as well as all applications and receipts for postage stamps and stamped envelopes and for dead letters.

WAR DEPARTMENT.

Hon. Jefferson Davis, Secretary of War. In the Secretary's office proper there are one chief clerk, seven subordinate clerks, two messengers, and four watchmen. The following bureaus are attached to this department:

Commanding General's Office.—This office, at the head of which is Lieutenant-General Scott, is at New York.

Adjutant General's Office.—Colonel Samuel Cooper, Adjutant General; Assistants—Lieut. Col. W. G. Freeman, Major George Deas, and Captain Seth Williams; Judge Advocate, Major John F. Lee; nine clerks, and one messenger. In this office are kept all the records which refer to the personnel of the army, the rolls, &c. It is here where all military commissions are made out.

Quartermaster General's Office.—Gen. Thomas S. Jesup, quartermaster general; Charles Thomas, assistant quartermaster general; Captain M. M. Clark, district quartermaster; Major H. C. Wayne in charge of clothing branch; eleven clerks and one messenger.

Paymaster General's Office.—Col. B. F. Larned, paymaster general; Major St. Clair Denny, district paymaster; eight clerks and one messenger.

Commissary General's Office.—Gen. George Gibson, commissary general; assistant, Captain A. E. Shiras; six clerks and one messenger.

Surgeon General's Office.—Gen. Thomas Lawson, surgeon general; assistants, Dr. R. C. Wood and Dr. Richard H. Coolidge; three clerks.

Engineer Office.—Gen. Joseph G. Totten, chief engineer; assistant, Lieutenant John D. Kurtz; five clerks and one messenger.

Topographical Bureau.—Colonel J. J. Abert, colonel of

the corps ; assistant, Lieut. M. L. Smith ; four clerks and messenger.

Ordnance Bureau.—Col. H. R. Craig, colonel of ordnance ; assistant, Captain Wm. Maynadier ; eight clerks and one messenger.

JOURNAL OF HOME AND FOREIGN COMMERCE.

PHYSICAL GEOGRAPHY OF THE SEA.*

BY LIEUT. M. F. MAURY, U. S. N.

WINDS AND CURRENTS—GULF STREAM—ATMOSPHERE, FOGS, ARCTIC OCEAN, SALT AND SHELLS OF THE SEA, MARINE ANIMALS, CALMS, DEPTH OF THE SEA, ETC.

This work is in a department of science where Lieutenant Maury is pre-eminent. We do not know any scientific man among our countrymen who has more signally shown how admirably intellect, observation, and industry, in those pursuits which the generality of men neither favor nor understand, may be brought to bear at once, and profitably, upon their material interests. In his observatory, among his instruments, and his drifted bottles picked up all over the seas, he has been silently designing and conferring inestimable services on the world. He has shown how navigation can be made safer and voyages shorter, and taught the hardy sons of the ocean where its much sought treasures are still to be found. Yet how few appreciate his great worth. Should he make his appearance in our wealthiest cities, and visit the counting-rooms of the most successful merchants, he would most probably receive no sign of recognition, and should he modestly ask for aid to publish any of his great charts he would be repulsed. This is the fate of too many of the great men of the world. Columbus was but the type of the race of unthanked sages who make all wise and all happy but themselves.

We undertake to say that most people do not know what the expression "Physical Geography of the Sea" actually means. If they remain in ignorance any longer it is no fault of Lieutenant Maury's. It seems that the present work grew out of the "Wind and Current Charts," and that its title was justified by their results. Its object is "to give a philosophical account of the winds and currents of the sea, of the

* New York Geographical and Commercial Gazette.

circulation of the atmosphere and ocean, of the temperature and depth of the sea, of the wonders hidden in its depths, and the phenomena which display themselves upon its surface, of its economy, its salts, its waters, its climates, and its inhabitants."

All this is ably done in eighteen chapters, each of intense interest. He thus describes the Gulf stream: "There is a river in the ocean. In the severest droughts it never fails, and in the mightiest floods it never overflows. Its banks and its bottom are of cold water, while its current is of warm. The Gulf of Mexico is its fountain, and its mouth is in the Arctic seas. It is the Gulf stream. There is in the world no other such majestic flow of waters. Its current is more rapid than the Mississippi or the Amazon."

The water, as far out from the Gulf as the coast of Carolina, is an indigo blue, distinctly marked by its sharp edge. Its cause is elaborately considered; but after comparing the opinions of the wisest men, we can do but little less than conjecture it. Various peculiarities, such as its galvanic properties, its temperature, its roof shape, its up-hill course, are satisfactorily treated. "It is the law of matter in motion," concludes Lieutenant Maury quaintly, "and not the shoals of Nantucket, which controls the Gulf stream."

The influence of the Gulf stream upon climate is an exceedingly interesting topic, which occupies the second chapter of the work. The circulation of its heated waters has a perceptible and beneficial effect upon the European coasts, mitigates the severity of the European winters, and even the severe cold of Spitzbergen.

The author imputes to the sagacity of fish the indication of the cold and warm currents of the ocean. The whale avoids the Gulf, but the tropical fishes delight in its warmth. It is said that the fishermen on the coast of Cornwall and Devonshire were much surprised, a few years since, to find their pilchard fisheries endangered by the strange presence of the bonito and albacore.

Lieutenant Maury is of the opinion that the cold water currents from the north which interpose their belts between our coast and the Gulf stream, or lie far below the surface, penetrate to the Gulf to supply the evaporating and boiling cauldron there, are the cause of our having such excellent fish in our Atlantic markets. The sheephead on the warm coral banks of the Bahamas is without flavor; but here, and as far south as Virginia, it is delicious food. "The inhabitants of the ocean are as much the creatures of climate," says Lieutenant Maury, "as those of the land." "The sea,

then, has its offices," and the whale which seeks its food off the western islands, borne thither by the Gulf stream, is cared for, and as much as equally, as the migrating bird which seeks the return of spring, and the food of its preferred haunts.

Lieutenant Maury attributes to the stream the power of a "weather breeder," that of a producer of fogs and gales in the North Atlantic, and quotes the opinion entertained by the British admiralty, after a deliberate inquiry into their nature, that the causes lay in the irregularity and want of correspondence in the temperature of the stream and the neighboring regions of air and water. The storms in the Gulf stream are always the terror of seamen. Lieutenant Maury seems to consider them rotary in their form, and adopts the name given them by Mr. Piddington, cyclones, (not cyclones, as incorrectly printed in the work.)

The influence of the stream on commerce and navigation has not been unnoticed. Dr. Franklin has the credit of making its temperature, when thermometrically observed, a guide to the seamen on our coasts; and Lieutenant Maury thinks it is in consequence of modern navigators understanding its character, and applying the thermometer, not only to shorten voyages, but secure a wished-for port, that the great decline in southern commerce has taken place, making, for example, Charleston an outside station, rather than a half-way house for navigators, as it was before the Gulf stream was comprehended.

The chapter on the atmosphere is a very interesting one; but in this field of research we have so many good authorities, and the advantage of so much cotemporary observation, that the demonstrations (for such they are) of Lieutenant Maury are without the particular interest they otherwise would have. Some of his conclusions are, however, very striking. One is, "that the whole mass of the earth must have been taken into account, and weighed, in order that the proper degree of strength might be given to the fibres even of the snow drop." And that "if the earth, the air, and water had not been in exact counterpois, the whole arrangement of the animal and vegetable kingdoms would have varied from their present state." This strictly philosophical view of the earth's density, and its atmospheric machinery, singularly corresponds with what may have been deemed a poetic license in the sacred writer, when he speaks of the waters being measured in the Creator's hands, and of the mountains being weighed in scales, and the hills in a balance.

Red fogs and sea dust are next treated by the author.

They are still the wonder of seamen ; but the microscope, in the hands of Ehrenberg, has detected them as consisting of infusoria taken up by the winds, and constantly swimming there. When the sea dust falls, it is attributed by some to the conflicting currents of air, and possibly to electric influences.

Lieutenant Maury attempts to show, and with great force, that the circulation of our atmosphere is much affected by magnetism, and that this guides the air across the calm belts of the tropics.

Of the currents of the sea, their government by settled laws, their indication of climate, their effect in equalizing the saline portions of seas, this work treats ably. We have also from the author very profound and satisfactory explanations of the currents of the Mediterranean, the Indian ocean, the Pacific, the Atlantic, the cold Asiatic, and the Peruvian current, so named after Humboldt. Of under-currents, so thoroughly tested by the experiments of the *Taney* and *Dolphin*, their design seems to be, in part, those of carrying off the large polar flow of waters into the Atlantic. The counter-currents of the Mediterranean Archipelago are, according to Admiral Beaufort, strong enough to prevent the steering of a ship.

The subject of the open sea in the Arctic ocean, treated in chapter 7th, though one of the briefest, is one of the most interesting in the whole work, not because it is intrinsically better, but because it has such close relations with the expeditions which have lately "vexed" the northern seas, and particularly with that adventurous voyage of our own countryman about to prove, no doubt, one of the most remarkable of them all.

It is not generally known that one of the earliest and most decided proofs of the existence of a northwest passage was that of finding harpoons, bearing the name and date of the whaleship's cruise, sticking in whales caught on the Pacific side, which were known to have been struck in Baffin's bay, and found so soon after their date, as to make it impossible for the fish to have accomplished the passage round either by Cape Horn or the Cape of Good Hope.

Lieutenant Maury says, that after examining the log-books of whaleships over periods of hundreds of thousands of days, it became evident that the tropical regions of the ocean were to the right whale as a sea of fire, and that the right whale of the northern is a different animal from that of the southern seas.

But there is other evidence of an open sea ; that of icebergs

of vast extent carried swiftly to the north against a strong surface current, and also in the migration of birds and animals to the north at certain seasons. Lieutenant De Haven, when well up Wellington channel, saw a "water sky" to the north, and Captain Penny went there afterwards, and found an open sea on which he sailed.

The salts of the sea are next considered; and the question so often raised is discussed: Why is the sea salt? Because, says Lieutenant Maury, a system of oceanic circulation exists which could not be kept up if the waters were fresh, since the dynamical force of the difference of temperature would be too feeble. Now, as surface-water becomes warm, and by evaporation heavier and more densely salt, it sinks to the bottom, and becomes a means of leading heat to distant climates by distribution, circulation, and currents. Thus we arrive at the conclusions that fresh water and salt have different laws of expansion, and that salt is, in fact, the principal dynamical agent of the sea.

Of sea-shells and marine animals, Lieutenant Maury states the opinion that their secretions directly affect the specific gravity of sea-water, destroy its equilibrium, produce currents, and control their circulation. To their secretion of salt we owe it that the ocean does not become like the Dead Sea! We cannot say that we fully coincide in this hypothesis, brilliant and novel as it is.

We imagine that, in the construction of the oceans, a certain proportion of saline matter was imparted to their waters at their birth, of which they are not deprived by any natural agencies, and which the influx of fresh water from the land or the sky cannot destroy, while balanced by great and unlimited evaporation.

The next chapter treats of the calm regions, called sometimes the horse latitudes, and also of the doldrums. Here both men and cattle, while crossing in sailing vessels from Europe or America, are often delayed for weeks, suffer for want of water, and die of ill health.

The next chapter treats of the geographical agency of the winds, where their effect on clouds, their production of rain, their evaporating power, and power of precipitation, must also control the action of rivers, mountains, streams, lakes, seas, floods, all agents which affect changes in deposites, strata, and surfaces.

The chapter on the depths of the ocean continues the interest of the work. To the American navy the honor is due of the present plan of deep soundings. All the European navigators relied upon the shock to be felt when the lines

reached the bottom, and their slackness when afterwards paid out. This proved to be uncertain. Various plans were suggested, and one of them by Ericson was really excellent. He sent down a column of air with his lead, the compression of which was to be indicated on an accompanying scale; but the pressure was too great, the instrument could not withstand it.

The simplest of contrivances obviated the difficulties. A common twine thread and a cannon-ball sinker was found adequate to probe the greatest depths, the twine measuring 600 feet to the pound, and the shot weighing 32 pounds. The twine was reeled off, and its whole length known. The ball was lowered, and on reaching the bottom was disengaged from the twine. The quantity run off was, of course, indicated by that left on the reel marked off by the hundred fathoms.

Lieutenant Taney sent down a line, and found no bottom at 34,000 feet. Lieutenant Berryman found none at 39,000 feet. Lieutenant Parker, of the frigate Congress, saw a line 50,000 feet run out with the same result. Mr. Brooke, of the navy, has added a contrivance by which specimens of the bottom may be brought up from these great depths, thus materially improving the apparatus.

It is evident, then, that with such an arrangement the basin of the Atlantic may be explored, and profiles of its lower forms obtained. This has proved to be the fact, and we have been able to discover plateaus like those between Cape Race, Newfoundland, and Cape Clear, in Ireland, on which it is proposed to lay electric telegraph lines, as well as deep valleys and high mountains, corresponding with the outlines of the land.

In the 12th chapter, which is devoted to this discussion, many curious facts are stated, and many striking suggestions made, which at this time we are not prepared to discuss.

The 13th chapter, on the winds, embracing the "trades," "rain winds," "monsoons," the "calm-belts;" the 14th, on the climates of the ocean, with isothermal charts; the 15th, on the drift of the sea, all involve the gravest and most important theories, and will lead to wide discussion.

The two last chapters relate to storms and ocean route, of which ample charts and descriptions have been published at the National Observatory. These have been placed before the public by timely publications, and we shall not allude to them now. By consulting the celebrated Mr. Piddington's directions for the observation of storms and hurricanes, it will be found that his opinions have much influence

with Lieutenant Maury, though but little known in this country. On the whole, this treatise, which we have but imperfectly reviewed, may be considered as occupying the first rank in its appropriate department, and Lieutenant Maury has erected for himself a statue that is imperishable. Valable maps and charts are appended to the treatise.

BANK CAPITAL OF CITIES IN THE UNITED STATES.

The following table is compiled from Homan's *Bankers' Almanac* for 1855. It contains the banking capital of every city or town in the United States having one million or more of such capital:

Cities and towns.	Banks.	Capital.	Cities and towns.	Banks.	Capital.
New York, N. Y.	52	\$48,482,900	Rochester, N. Y.	6	\$1,630,000
Boston, Mass.	37	32,460,000	Syracuse, N. Y.	10	1,647,500
Philadelphia, Pa.	15	10,618,600	Troy, N. Y.	11	2,991,470
Baltimore, Md.	13	8,471,796	Utica, N. Y.	6	1,735,200
New Orleans, La.	8	14,702,600	Newark, N. J.	4	1,708,650
Bangor, Me.	13	1,350,000	Pittsburg, Pa.	5	2,743,200
Portland, Me.	6	1,775,000	Lynchburg, Va.	4	1,169,300
Fall River, Mass.	3	1,150,000	Petersburg, Va.	3	1,170,000
Lowell, Mass.	6	1,450,000	Richmond, Va.	3	2,114,000
New Bedford, Mass.	4	2,100,000	Wheeling, Va.	4	1,293,500
Salem, Mass.	7	1,710,000	Wilmington, N. C.	3	1,050,000
Springfield, Mass.	6	1,350,000	Charleston, S. C.	9	10,756,735
Worcester, Mass.	6	1,600,000	Columbia, S. C.	3	1,300,000
Providence, R. I.	37	12,896,460	Augusta, Ga.	7	3,175,000
Bridgeport, Conn.	5	1,049,500	Savannah, Ga.	5	3,041,190
Hartford, Conn.	10	5,926,900	Mobile, Ala.	2	2,000,000
New Haven, Conn.	6	2,845,075	Chicago, Ill.	6	1,264,000
Norwich, Conn.	6	1,314,109	Covington, Ky.	2	1,000,000
Albany, N. Y.	9	2,921,100	Lexington, Ky.	2	1,380,000
Brooklyn, N. Y.	6	1,750,000	Louisville, Ky.	4	3,260,000
Buffalo, N. Y.	11	2,241,800	Nashville, Tenn.	4	5,341,500

In New Hampshire, Vermont, Delaware, Ohio, Missouri, Michigan, Wisconsin, Indiana, Mississippi, Texas, Arkansas, Florida, and Iowa, there is no one town or city having bank capital to the extent of one million of dollars. This remark seems singular when applied to such places as Cincinnati, St. Louis, Detroit, Galveston, &c., where there is a very large export trade, but the legislatures of the States in which these places are located, have adopted stringent laws upon banking, and discouraged the introduction of capital to be employed in banking. St. Louis, with a population of 100,000, and a larger export trade than that of Philadelphia or Baltimore, is allowed only one bank, and that with a capital limited to \$600,000.

Arkansas, Iowa, and Florida have no chartered banks, and the legality of the only two in Texas and Mississippi has

been questioned. Providence has the largest bank capital, for its size, of any city in the Union. New Orleans is the next. Charleston, Hartford, and Nashville are also largely favored, as appears by the above summary.

THE SHIPPING OF THE WORLD.

The London News, of a late date, publishes a long article headed the "Shipping of the World," some of the details of which are interesting. It is curious, first, to notice to how large an extent Great Britain and the United States have monopolized the carrying trade, and secondly, how nearly our own country has approached Great Britain in the commercial supremacy of the seas, and how certain is the fact that in a short time she will have outstripped her. The total floating tonnage of the whole civilized world, excluding only China and the East, consists of about 136,000 vessels of 14,500,000 tons. Of this total tonnage, 9,768,172 belongs to Great Britain and the United States, so that, excluding these two great maritime nations, the total commercial tonnage of the remainder of the civilized world is but 4,500,000, or less than that which either Great Britain or the United States individually possess. Even France, which comes next in the scale, is insignificant in comparison, its total tonnage being 716,000 tons against 5,043,270 for Great Britain and 4,724,902 for the United States. Italy and Sardinia stand next to France, then Holland, Prussia, Spain, Norway, Sweden, &c.

The comparative entrances and clearances of Great Britain and the United States in 1854 were as follows:

	<i>Tonnage.</i>
Great Britain and colonies	42,573,362
United States	40,000,000

Thus, though the mercantile marine of Great Britain seems the largest in the world, the writer from whom we quote admits that it will be surpassed by that of the United States, which has already augmented one-third since 1850. The accurate tonnage of the entrances and clearances of American vessels cannot be given as authoritatively as is the case with regard to British vessels, because the returns are not kept with the same official exactness. Hence, the above total set down on the American side is to some degree hypothetical, but there is reason to believe it is not overstated, but rather that the additional dispatch with which American vessels are freighted, and the accelerated speed with which they perform their voyages, has not been fully allowed for in the estimate. The tonnage of the ships, however, is stated on official data,

and it shows the American aggregate to be but one-sixteenth less than the British. This fact, when taken in connexion with the infancy of our marine, and its present rapid increase, shows how short will be the time required to overbalance the advantage which Great Britain now possesses, and to place the United States first in the rank of commercial nations.

The British colonies in the Pacific have several vessels, and the Eastern possessions, Siam, China, and the islands in the Indian ocean, have large fleets for trade or piracy, which must not be omitted in an estimate of the shipping of the world. The floating tonnage of the civilized world is estimated to consist of 136,000 vessels, with an aggregate tonnage of 14,500,000 tons. The number of seamen in all these vessels is supposed to be about 800,000, and including the Eastern States, China, &c., of the marine population of which we have not any accounts, there must be at least a million of persons engaged at sea and generally on the ocean. This rapidly increasing floating population is one of the curiosities of modern civilization. The Daily News pertinently remarks in regard to them:

“Latterly this population has not been considered a part, and has separately borne no share except as subsidiary to political power in the changes of society. But the time is coming when its numbers and its rapid extension in the United States—the shipping has been quadrupled, while the population has been only doubled—must force it on the attention of historians and philosophers. Of late art has added much to its power. Steam has given it feet fleetier than wings. The attention of scientific men is now being drawn to it, and chiefly by the labors of Lieut. Maury, of the United States, a large army of observers of natural phenomena, scattered over every part of the ocean, have been suddenly called into existence. Every ship captain has been taught how to profit by his opportunities and to become a registrar of facts. As it has become numerous and influential, the profession has become ennobled, and resuming its old place in civilization, the maritime population is destined again to take a lead, and as they at first helped to scatter, they now cement the various nations of the world into one society. A comparatively short time has elapsed since Holland, now possessing less than a fiftieth part of the seamen and tonnage of the world, was the greatest naval power in existence, and a match nearly for all other maritime nations. Holland has not declined since then, but other maritime nations have risen, and the impulse she strengthened is continued and increasing throughout the world. Trade, as an essential part of society, and shipping

to carry it on, are comparatively in their infancy. That every part of the ocean may yet be as crowded as the British channel is not improbable. America is fast filling with people growing in intelligence. Every part of her coast is likely, at no distant day, to be as well provided with vessels as the shores of the Hudson. That the waters of the ocean are to become peopled like the land, cannot be supposed; but within a period, judging from the rapidity of the progress in the last hundred years, likely to be extremely short in relation to the historical period of the world's existence, they may be all as crowded with vessels as the channel."

The writer of this article says accidental collisions between vessels at sea are very much on the increase, but he does not know that they are more so than the rapid increase of the number of vessels navigating the ocean might be supposed to occasion. The increase of the speed of the ships and the increase of their size are also elements which ought to be taken into the calculation. It is to be hoped that there is an increase of knowledge and carefulness on the part of the captains and crews; so that perhaps there is not, generally speaking, any very great increase of danger from collision. An admiralty return has just been published, which shows that the wrecks on the coasts and in the seas of the United Kingdom, during 1854, were 987, being 153 more than those in 1853, while the loss of life increased from 889 to 1,549. This return shows collisions at sea to be greatly on the increase.

MANUFACTURES, MINING, AND INTERNAL IMPROVEMENTS.

AGENCIES TO BE DEPENDED UPON IN CONSTRUCTING INTERNAL IMPROVEMENTS.

NO. I.—STATESMANSHIP—WHAT IS IT?

"My object (says the writer of this paper, in a note to the editor of the Review, written from Galveston, Texas) is to bring up a subject of much public importance to the better and more serious consideration of the south, that is, the agency that should be mainly depended on in the construction of internal improvements.

"The citizens of the south, and more especially of New Orleans, have felt the effect of the agency I allude to. They have also, in a great measure, deceived themselves, in supposing that incorporated companies at the north were the subjects of competition against which they had to contend for the commerce of the west.

"With the motive of bringing out this subject, I would propose to publish a series of articles in your Review, and would invite such criticism as you may deem proper. I think you will accord with me in saying that the *strongest instru-*

mentality, under a sound system, can be made as much more competent for beneficence as it is for progress.

"I send you enclosed a portion of an article, which is a part of a series I would wish to publish, if agreeable."

"By its fruits shall ye know it." This declaration is as true when applied to the principles of political economy as when employed to test the moral and religious conduct of men. "There is a true and a false," "a right and a wrong," always incident to the effort of investigation; but there is no touchstone but that of result to determine the accuracy or justice of human undertakings.

Some talk of necessary evils as though an evil agency could be profitably employed in the work of beneficence. Some talk of individual scheming; call it by the gentler name of "private enterprise," and, as their highest view in the appreciation of statesmanship, believe that sound policy has no better foundation to rest on than that of individual speculation. This sentiment has grown to be enormous, but whether under the active and incessant teachings of mammon, or the delineation of principles emanating from the higher degree of political intellectuality, remains to be settled. Could a people always bear in mind the sentiment, that "eternal vigilance is the price of liberty," and add to it that unceasing care is the price of protection, and unabated effort of the masses in concert the only adequate basis for the rapid progress of the masses, political error would soon be driven from the State.

Every one will agree in the abstract that "to tax the many for the benefit of the few" is morally and politically wrong; that to tax the few for the benefit of the many is equally so. All just minded men acquiesce in the proposition, that to lay burdens equally on all classes in proportion to benefit received is the true rule, and that there is no other rule in political economy or statesmanship that is worth a moment's consideration. Just minded men differ only as to the means, the agency, and measures to be brought into requisition in order to produce this result. Here lies the desideratum that employs true statesmanship; that under democratic government combines the fractional elements of power into one great power, and exercises it so as to bring order out of disorder, and the strength of system out of confusion. Where this cannot be done, we may set it down as a mark that society, from defect of political education, is not prepared for true statesmanship, or that there are no statesmen within the State. When we deliberately come to this conclusion in Texas, and despair of both popular capacity and official patriotism, we shall be ready, perhaps, to deliver into the keep-

ing of an artificially created but irresponsible agency the progress and destinies of the State.

Had statesmanship not been wanting in the English Parliament, Thackeray's Book of "Snobs," which presented the ridiculous side of a false political economy, would never have been written. Had not popular ignorance been made to subservise the purposes of mercenary speculation in high places, the English journals and periodicals would not have so teemed with the exhibition of railway frauds, nor Newgate appeared so worthy of patronage from "crime in broadcloth." Had New York never departed from her original policy, we never should have seen it announced in the Railroad Journal that a single corporation had mismanaged to the amount of thirteen millions; nor should we have read in the same print of another company issuing ten millions of "paid up stock," without a dollar additional subscription; and under circumstances so questionable as to bestow on it the appellation of "high priest of swindlers." Had not this false political economy been suffered to buy itself into existence, and thus override for a time the doctrines of Clinton, Schuyler would not have "*Schuylerized*" his own projects, nor the credulous thousands have paid the penalty always incurred by false confidence; neither would Wall street have congregated the villainous plottings of the whole land; been made the seat of moral pestilence, where imposition is concocted, and cheating on a high scale turned into a trade by political thieves. Could the incidents of fraudulent imposition connected with the corporate railway system of the United States, during the last ten years, be presented in a condensed form to the public mind, no difficulty would arise in determining its comparative degree of demerits. That, however, is impossible. It is only in the places where it has festered to a head that criminality discloses itself, whilst the secret plottings for intended crime are seldom divulged so as to fasten on the originators. Their great game of deception, unlike the drama, is heralded by no degrees of disclosure, but merely found in the *denouement*.

Were the evils of the corporate system of internal improvements confined to the practice of those arts connected with raising and depressing the value of stocks and securities, directors robbing and swindling stockholders, and the innumerable frauds practiced on innocent but credulous third third persons, they might be borne with something like grumbling complacency, at least by those who had not been defrauded. Aside, also, from the power of its parts in combination to take venal possession of legislatures, there are

still deeper causes of injustice that lie at the inception, and underlie the whole foundation of the corporate system.

I have heretofore, on many occasions, illustrated by comparison the better economy in finance, arising from the employment of State credit. I have repeatedly urged the great necessity of an economical adjustment of our railways, and which is attainable only by making our system a unit. I have endeavored by reference and argument to show the importance of concentrating our own commerce within the borders of the States. I have often alluded to the injustice of virtually throwing the whole burden of sustaining our improvement system from year to year on the agricultural interests. I have endeavored to illustrate the inequitable policy of local, as compared with general taxation, for internal improvement purposes. The unjust effect of the corporate system has also been portrayed, in a delineation of the disabilities to the people of the back country, were corporators allowed to take possession of the revenue paying sections of improvement near the coast. These considerations are truly important; but there is another of such glaring magnitude that it never ought to be lost sight of, and would be sufficient, in my mind, forever to exclude the corporate system from the State.

Had we population and wealth sufficient to commence railways under corporate system, by whom would they have to be built? What has uniformly happened in other States would undoubtedly transpire in this. Human nature must be altered, or the liberal, public-spirited portion of our citizens would be obliged to construct our roads. Tennessee will yet afford an apt illustration of what has occurred in other States as it respects the injustice of sacrificing her best citizens for the benefit of the public. Look at the adjustment of her railways, running as it were from centre to circumference, and carrying the commerce of the State in four principal directions, towards Charleston, Mobile, Memphis, and Louisville. The State transfers its commerce everywhere, but concentrates nowhere. It is immaterial whether this arises from topographical inability to do otherwise, the probable result will be that the State will have no revenue paying roads; there is still a greater certainty that her roads will not average in value fifty cents on the dollar of their cost. The average value of railway stocks in the United States is now below sixty cents on the dollar. Assuming that the roads in Tennessee will be worth the average value, and, making due allowance for the debt they may represent as contradistinguished from stock, the motives to investment

do not appear encouraging. The State of Tennessee lends ten thousand dollars to the mile, taking a lien on the road for repayment. If the State preserves and enforces its lien, it is not difficult to conjecture as to the balance left the public spirited citizen on his investment. I admit that Tennessee needs these roads. Her citizens have suffered long and much for the want of them. They will enrich the State many times beyond their cost. The fault I find is, the cruel injustice of the system that sacrifices the best citizens of the State for the public good, when a little correct statesmanship would place the burden where it legitimately belongs—UPON THE WHOLE PEOPLE.

To come back to Texas. What a vast work is to be done in order to accommodate its present and future wants in public improvements. Let the liberal and public spirited citizen now ponder well the question. If we adopt the State system, you are placed on an equality of advantage with all your fellow citizens. If we adopt the corporate system, or other system bearing any near analogy to it, you and the class to which you belong are subjected to an all but unending sacrifice for the benefit of the State at large. The consideration that brings us to the desperate resort of adopting the corporate system arises from the unfounded belief that our citizens are incompetent to put into successful requisition the higher principles of statesmanship. Public spirited citizens of Texas, it is you I am now addressing. Remember always that it is easier to assert and maintain twenty truths, connected with sound political economy, than to keep up the delusion over a single falsehood. If you proceed with the corporate system, and make progress, you will be obliged to become dishonest. You will be under the necessity of adopting false estimates and deceptive calculations as to cost, patronage, and revenue, or you cannot persuade your fellow citizens to take stock. The labor required to do this will be very great, for it is a game not as easily played as formerly. If you will bestow one fiftieth part of the labor required for this in persuading your fellow-citizens to be reasonable, and one thousandth part of the sacrifices to be incurred in disseminating sound information, the State system may soon be adopted, and every reasonable degree of progress made under it.

I make the assertion, that under the corporate system not the first foot of revenue paying road can be constructed in Texas for many years to come. The future will disclose a gloomy fulfilment of the prophecy as often as the experiment is tried. We may imagine a system laid down under an economical adjustment, and proper economy in finance, em-

bracing some fifteen hundred miles, where particular sections would yield enormous revenues, and the whole, as a unit, be a fair investment; but this pre-supposes the whole constructed and in operation. For corporators to proceed from the coast, however, with no roads constructed above as feeders, would be a very different thing. The lower sections would pass into other hands at a sacrifice of their owners, long before anything was constructed above, and the feeder, when constructed, before being fed, would share the same fate. It would be in this way the country would go on for a long series of years, feebly proceeding step by step on lying estimates and false calculations. To say there is statesmanship in such a process, and that true political economy requires the continuous sacrifice of the best citizens, is an assertion I would not attempt to maintain before a man of sense or an honest man. I am not disposed, however, to censure the efforts of our citizens who think this course their only resort. They do not see these results as I have witnessed them in other States, nor do they appreciate the strength and advantage of the State system, as I have seen them demonstrated in the comparison. I am prepared to make due allowance for the galling restraints upon our prosperity, and wonder not that they should excite even desperate resolves to remove them. I must, however, express my repugnance to any proposed course of our citizens that would unavoidably infract the sound principles of a just political economy. I am as ready to repudiate the cant expression of "*private enterprise*" as any other term, when substituted in the proper place, of "*suicidal undertaking*;" nor would I be more willing to encourage even the motive to gain, when I knew it would be disappointed over unprofitable engagements. I am therefore bound to say, that whoever indulges in the delirious dream of profit on corporate investment for railways in Texas will awake to the reality of "*private sacrifice*."

We often hear expressions made use of by patriotic men, that have in reality no practical meaning. Under the apprehension that we could not make the proposed State system a sound one, they talk about "bankrupting the State." If we consider that our people, their social advantages and their property compose the State, then indeed is the State sufficiently bankrupted already. There is now resting, "like an incubus," upon our whole people, every element of common and individual sacrifice. Distresses and complaints, and just ones too, arise from every quarter; and all the newspaper puffs, as to public prosperity, are inadequate to disguise the deep seated and discouraging disabilities under which our

people are laboring. It would be a better expression, and more in keeping with our present condition, to say, "the State is already bankrupted." It is to escape this condition—to create wealth, and to establish the basis of common and permanent prosperity, and thus make the State and its people solvent—that we are talking about and devising plans for internal improvements. The advocates of the State system are trying to get beyond the narrow idea of locality, and to make the sentiment felt that we have a State instead of a mere locality to be cared for. They are trying to influence our people to come together in concert of action, and, under a healthy and prudently devised system, "to make a strong pull, and a pull altogether." Others have heretofore been calling on the "false gods to help us;" the sacrifices demanded have been offered, but the gods relied on seem to have "gone on a journey." It is now proposed that we should follow up this heathenism in political economy, by throwing our public spirited citizens under the wheels of the corporate Juggernaut. This is insisted on as the further sacrifice and condition precedent to the relief of the State. The advocates of the State system neither believe in this doctrine, nor do they believe that were the sacrifice incurred it would effect the purposes intended. They can see no correct or sound principle of statesmanship in it. The often repeated expressions, such as "grinding taxation," "bankrupting the State," &c., have no alarming sound to the intelligent political economist. They were invented by ignorant but pretending demagogues. The stereotype on which the largest edition was ever printed was worn out in Clinton's time, and thrown by in a dusty corner. Corporators hunted it out and imported it into Texas, on the supposition that it would still strike a degenerate copy, sufficient to alarm the timid fears of a border State people. Happily, these gloomy forebodings are in most instances being appreciated as they should be—an admonition to forethought and carefulness, but not as a discouragement to progress. It is now getting to be thought that the "Ship of State" can be built, and ballasted, and trimmed, and manned by our own citizens; the future will disclose whether we have as much of the live oak material in Texas as exists elsewhere.

I have said on another occasion, that the State system had no hired advocates. I might here repeat the declaration, with the additional remark, that no citizen must expect to make any speculation out of it, except his share in the common benefit. It must be carried forward by patriotism, good sense, and rationality, or it will never be carried at all. It

addresses itself to the judgment and consciences of men, and will be made dependent on the popular intelligence for its success. Many things must be taken into the account together in order to reason upon it correctly; but, as fast as the subject is mastered, will its advocates see the way clear. The question has already far progressed, and our citizens are much in advance of the press. The doctrines of the dead, but living Clinton, have raised up many intelligent teachers in Texas, so much so, that should those who commenced the advocacy of the State system three years ago now attempt to put it back, it is believed they would not succeed. The present is an auspicious time—the world is filled with argument in its favor.

[To be continued.]

NEW ORLEANS, JACKSON, AND GREAT NORTHERN RAILROAD.

The last report of Colonel Campbell, the President of the road, will be read with interest, says the New Orleans Bulletin. It is a lucid, sensible, business-like document; sufficiently elaborate and circumstantial in detail to embrace the facts of the subject, without being prosy and tedious. For the sake of convenience, the president, in his report, considers the road in separate geographical divisions; giving the condition and progress of each division. The report is also very full and explicit in reference to the financial department, and the general prospects of the road. There is no one subject of more vital interest to the people of New Orleans than this same road, which is to bring us in direct communication with the Ohio valley and all the intervening region of country, for the rich trade and commerce of which this city is the natural depot. Although the report will be read, as it should be, by every one, we will give a summary of such salient features in it as are more strikingly important.

The first division, embracing eighty-eight miles, from the city of Osyka, a fraction of a mile beyond the Mississippi State line, was completed in August last, since which time daily passenger and freight trains have been running. The public will be gratified to learn that contrary to what was anticipated, the travel and traffic on this section of the road have more than equalled the expenses. Another interesting fact has been established in the construction of this work. We were in the habit of hearing a great deal of the "trembling prairies," which are marshy bogs, composed of layers of vegetable matter and earth, occasionally separated by strata of river clay. Experienced men, and even engineers,

confidently predicted that it was impracticable to build a railroad over these prairies. The falsity of these predictions and fears have been demonstrated. The route over the four and three-quarter miles of prairie, terminating at Bayou Labranche, is as substantial as any part of the Jackson railroad. Beyond the thirtieth mile the road traverses the two passes of Manchac, which are crossed by two substantial bridges, one 1,800 feet in length, and the other 700 feet, each provided with drawbridges. These bridges are perfectly firm, without the slightest variation in their original adjustment.

On this division there is sixteen miles of swamp, over which the road is supported upon cypress crib work about four feet high. This distance is in process of being filled up with earth. In the course of two years the whole distance between the city and Bayou Labranche will be filled up and ballasted, and the first forty-six miles of road, which was so often pronounced impracticable, will not be surpassed for efficiency and all practical purposes by any road in the country.

Of the first Mississippi division, from Osyka to Jackson, ninety-five miles, seventeen miles are now ready for the rails, and the grading of seven more will soon be completed. On this division there are fifteen more miles under contract.

The second Mississippi division, from Jackson to Canton, twenty-three and a quarter miles, is in progress of construction, and the road will be opened for transportation towards the close of the year.

The third Mississippi division extends from Canton to the Tennessee, two hundred and four miles. For certain reasons of a local character, the progress of this part of the road has been retarded by the defection of some of the Mississippi subscribers. The suspension of the work, however, is deemed to be only temporary. From the completion or progress of this road, and that of the Mobile and Ohio road, and the lateral roads from the Mississippi to Louisville and Nashville and to the Atlantic seaboard, which the two former roads intercept, the president sees in the distance, and not a remote distance, a direct communication between the northern lakes and the Gulf, by which New Orleans will be made the entrepot of a region of country not surpassed in fertility and agricultural wealth by any country in the world.

FINANCIAL DEPARTMENT.—The finances of the company (although at this period of money pressure they cannot realize on their credits as expeditiously as would be desired) are in a very healthy condition. Our space will not allow us to give the details. For particulars we refer to the report, which is remarkably comprehensive and intelligible, a fact not com-

mon to all reports. By judicious and enlightened legislation, by which negotiable credits or bonds were substituted for the annual subscriptions from the city and State, the company have been put in possession in advance of a large amount of means, which, if the terms had permitted, might at once have been made available. In consequence of the failure to make a loan on the "construction bonds," as they were called—which were predicated on the taxes—a debt of current expenses has accumulated to the amount of \$1,000,000, which was converted into bills payable at convenient periods. To meet these bills it became indispensable to negotiate bonds, and it was deemed advisable that the president should proceed to the north, or to Europe, if necessary, to accomplish the object. How ably and successfully he succeeded in his mission the public has been before advised. He succeeded in negotiating a loan in Europe of fifty thousand pounds sterling, and in selling bonds to the amount of over two hundred thousand dollars, on more favorable terms than were anticipated. He also contracted for a sufficient quantity of iron to lay the road between Jackson and Canton, 23½ miles. This part of the president's report is exceedingly interesting, and we solicit for it particular attention.

The feature of this report that will be most apt to attract the attention of the public and provoke its unqualified approbation is, the singular prudence and judgment of management by which the expenditures of the company and its operations have been made to accommodate themselves to their means and circumstances. We notice ~~no~~ extravagant schemes for pushing on the work without the requisite provision of funds, no ill-advised contracts with irresponsible individuals, no wasteful accumulations of stock and materials, no loss of interest upon suspended debts. There seems, from the report before us, to have been throughout the management a provident adaption of means to ends. We deem one fact stated by the president of most gratifying intelligence, and which should be regarded as a triumph of financial skill, that notwithstanding the unprecedented pressure of monetary affairs, and the distrust of railroad securities, the New Orleans and Jackson Railroad Company have never had a note or bill protested. We again say to our readers, and they are all most deeply interested in the subject, read the whole report through.

CHARGES ON RAILWAY TRAFFIC.

The Boston Post of the 20th contains a somewhat elaborate article upon the question, "Ought the charges on railway

traffic be increased?" The reports of several railway companies to the legislature of Massachusetts, the Post says, justify the following conclusions:

1. That the expenses of railways have increased, since 1842, nearly thirty-seven per cent.
2. That the merchandise traffic has increased in a greater ratio than the passenger.
3. That the rates charged for merchandise traffic have hitherto been scarcely remunerative.

A statement is given showing the number of miles run, and the total receipts, expenses, and nett income per mile, from 1842 to 1854, inclusive, by which it is shown that whilst the receipts have remained nearly stationary, the expenses have largely increased, and the nett income has diminished twenty-five per cent.

The expenses of handling freight absorb about ninety-one per cent. of the receipts therefrom. It is stated that one superintendent carried one thousand four hundred barrels of flour ten miles for 1,600 cents. Other prominent facts are given, and the conclusion drawn is that the railroad policy must be changed; that a reciprocal duty is incumbent upon both parties, the company and the public. The writer sums up his argument thus:

"Railroad proprietors should not be too exacting on the one hand, neither should the public expect too much on the other. Passengers and merchandise should be transported at as low rates as are consistent with safety, economy and remuneration for capital invested; and the public should be willing to concede such compensation as is fair in comparison with other business. A railway company is merely a stage-driver and a teamster upon a large scale. 'Live and let live' is a good maxim in all business; and railway transportation should form no exception to so good a general rule."

ALABAMA COAL.

¹ The steamer *Isabella*, having been purchased by the Alabama Coal Mining Company, is now fitting up for a towboat, and will be the first of a line of steamers and barges which the company intend to establish as a sure conveyance of their coal to the different markets. The coal from these mines is said to be of an excellent quality and in great abundance. We are indebted to the Alabama and Tennessee River Railroad Company, whose road runs through these coal regions, for this new trade; also to the enterprise of the proprietors composing the Alabama Coal Mining Company. We hope that

this company will be able to regulate the coal trade, so as to avoid, in a measure, the fluctuations to which it has always been subjected here as well as in Mobile. These mines are situated in the counties north of this place, through which the Alabama and Tennessee railroad passes. These counties abound in coal mines, which are inexhaustible, as, also, in minerals of different kinds, which, when fully developed, must make this one of the richest of the southern States.

GEOLOGY OF THE STATE OF MISSISSIPPI.

It has already been published in several papers of our State that I have discovered, on my geological tour through the southeastern counties of the State of Mississippi, a very important and really inexhaustible deposit of shell-marl. This deposit is in the southern part of Clark county. I found it first on the plantation of Gen. W. B. Trotter, in a deep gully, with high and perpendicular bluffs, on section 3, township 10, range 7 west, about 20 feet under the surface, cropping out in the gully. This really valuable deposit of marl is evidently a member of the tertiary (eocene) lime formation, which is so well developed in the southeastern part of our State. This formation is similar to the cretaceous formation of the secondary period, of which it is most evidently a continuation. It consists—

1. Of a hard carbonate of lime, or white limestone, in many localities eminently fit for burning quick lime ;
2. Of a soft aluminous carbonate of lime, an inferior kind of marl, and
3. Of a fine green sand, full of tertiary shells, and of a superior quality, generally better than our green sands of the upper and lower cretaceous formation of the secondary period, and eminently fit for a marl of prairie and heavy clay soils.

The deposit of fine marl above mentioned takes the place of the green sand of the tertiary lime formation ; it consists, to a large extent, of the detritus of shells and their former inmates, the decayed mollusks. This bed of sand is not confined to Gen. Trotter's plantation. I found it also outcropping along the bluff of the Chickasawhay river. This bluff is in that locality (section 3, township 10, range 7 west) very nearly 100 feet high ; the deposit of marl appears for miles along the river, and forms its bed for more than one mile ; it is in some places at least 50 feet thick. This deposit appears to dip from east to west ; its strike is decidedly from north to south. At the first view of this deposit of marl, I recognized its superior quality, and its great importance for a purely

agricultural State, as ours is. I declared it instantly the best marl I ever had seen, but a rapid analysis to which I have, since my return to our university, submitted the specimens of marl collected partly on Gen. Trotter's plantation, partly on the bluff of the Chickasawhay river, has by far exceeded my expectation.

According to this analysis, the marl contains in 100 parts—

Iron and soluble alumina.....	8.000
Carbonate of lime.....	32.954
Phosphate of lime.....	3.352
Sulphate of lime.....	3.648
Chloride of magnesium.....	900
Potash and ammonia.....	6.840
Insoluble silica and alumina.....	41.530
Hygroscopic water and loss.....	1.740
	100.000

According to the above analysis, 100 pounds of the marl contain 58.460 parts of soluble matter. This soluble matter consists of 8 pounds of oxide of iron and alumina; nearly 33 pounds of carbonate of lime; 3.352 pounds of phosphate of lime; 3.684 pounds of sulphate of lime; 9-10 of a pound of chloride of magnesium; 7.840, or very nearly 8 pounds of alkalis, mostly potash and a small quantity of ammonia. It is, therefore, very evident that this marl must be a most excellent manure, especially for light soils, of which the northern, middle and southern parts of our State abound. It contributes to the value and importance of the deposit of the marl, that it is not only situated in a region where it is eminently applicable, but that it is immediately on a navigable river, and within a mile or two only from the Mobile and Ohio railroad; it can, therefore, easily be transported to many counties of this State and of Alabama.

Of what importance good marl is for an agricultural State is shown by the example of the States of North Carolina, Virginia, and New Jersey; a large part of the land of those States is actually renewed by the effect of marl, and I doubt whether either of those States can produce such a superior marl as that of the deposit of Clarke county, which is, indeed, not much inferior to guano, and for some soils of our State even better.

The great importance of this deposit of marl for our State has induced me to hasten the publication of its discovery and quality, and I now invite the agricultural public to avail themselves as soon as possible of this fine manure, and to inform the undersigned of its effect.

The tertiary lime formation in Clarke and Wayne counties does not only afford this fine marl, but, as I have already re-

marked, the upper part of it, the hard carbonate of lime or limestone, yields in some places a most excellent material for burning quick-lime. Such a locality I found in Wayne county, on Round Hill, near Limestone creek, immediately on the Mobile and Ohio railroad, and on the plantation of Dr. E. A. Miller. There are three different kinds of limestone to be found, viz: a very hard white limestone, hard enough for building; a soft limestone of a yellowish color, and rather brittle; and lastly, a shell limestone, nearly entirely formed of tertiary shells, especially of the genus *Pecten*, and still more mixed with the oxide of iron, and, therefore, very yellow. I collected specimens of all those different kinds, and an analysis of them has given the following results:

No. 1. The hard limestone consists in 100 parts of—	
1. Insoluble silica and alumina	6.300 per cent.
2. Oxide of iron and soluble alumina.....	7.200 “
3. Carbonate of lime.....	86.500 “
No. 2. The soft limestone contains in 100 parts—	
1. Insoluble silica and alumina.....	15.050 “
2. Iron and soluble alumina.....	5.350 “
3. Carbonate of lime	79.500 “
No. 3. The shell limestone contains—	
1. Insoluble silica and alumina	9.200 “
2. Oxide of iron and soluble alumina.....	6.650 “
3. Carbonate of lime	84.150 “

Carbonate of lime contains, besides the lime, carbonic acid gas at the rate of 43.708 per cent. No. 1 contains, therefore, in 100 pounds only 48.693 pounds of pure quick-lime; No. 2 only 44.809 pounds; and No. 3 only 47.370 pounds. If well burned, 100 pounds of No. 1 will, nevertheless, weigh 62.193 pounds, but 13.500 pounds are impurities, and only 48.693 pounds are pure lime; 100 pounds of No. 2, well burned, will yield 65.304 pounds, but 44.809 pounds are only pure lime, and 20.495 pounds are impurities mixed with it; 100 pounds of No. 3, well burned, will yield 63.220 pounds, but 47.370 pounds are only pure lime, and 15.850 pounds are impurities. It is, therefore, evident No. 1, the hard limestone, is the best for making quick-lime; it not only yields most, but gives also the purest lime. If we have such fine material for manufacturing quick-lime in our own State, why do we not use it? Why do we purchase our lime from other States, especially from the north, if we can make it ourselves fully as good and much cheaper than we buy it?

L. HARPER.

UNIVERSITY OF MISSISSIPPI,
Geological and Agricultural department.

MINING STATISTICS OF CALIFORNIA.

Dr. Trask, the geologist of the State of California, in his recent report to the legislature, states that the area that is now known to contain valuable deposits of gold is believed to be at least six times greater than that which was developed during the years of 1848 and 1849, while the number of miners actually engaged in the extraction of gold is less than those of 1852; yet the export of the year last past exceeds by nine millions the total exports of the former year.

The capital invested in and the gross receipts of the quartz mines he states as follows:

Investments	-	-	-	-	\$1,127,000
Gross receipts	-	-	-	-	2,157,000

Total capital and products for 1854 - - \$3,284,510

From the above it appears, says Dr. Trask, that the aggregate product of these mines is about four per cent. of the product of the State, as far as the latter is known with any degree of certainty.

The aggregate number of persons actively employed in extracting the ores and in reducing the same amounts to six hundred and ten, bearing a very small proportion to the great mass engaged in the other branch of mining in the State.

He gives also the number of water companies for mining purposes; the number of miles constructed in seven of the mining counties, and their value in each county, as follows:

Counties.	No. Companies.	No. Miles.	Valuation.
Amador.....	15	129	\$298,000
Calaveras.....	12	165	397,000
Eldorado.....	10	173	380,000
Nevada.....	27	210	412,000
Placer.....	11	160	369,000
Sierra.....	14	137	180,000
Tuolumne.....	20	185	446,000
Total.....	109	1,159	2,470,000

GEOLOGICAL REMARKS RELATING TO THE WEST AND SOUTHWEST OF THE UNITED STATES.

BY WILLIAM F. ROBERTS.

Since my return from an examination of the coal and other mineral deposits on the Ohio river, and of the States of Missouri and Kansas, with the territories occupied by the Choc-taw and Cherokee Indians, I have been frequently requested to make known to the public the impression derived from an exposing, laborious, and highly interesting and instructive geological tour, with the hope that the knowledge thus obtained will contribute to draw the attention of the public to

the wonderful and varied resources of the richest portion of this great republic—a section of our country not well known, where persons seeking investments of this kind will find the most reliable and tempting opportunities, and where the industrious farmer and mechanic and other operatives (whom it seems are likely, considering the present situation and future prospects of Europe, to emigrate to this free and happy Union in much larger numbers than hitherto they have done) will find the most desirable locations for their future homes. My examinations were made on horseback, in a section of our country where I had not before been, and, considering the time spent, were very thorough and extensive, as the specimens I collected will show.

In one State alone (Arkansas) I travelled near four thousand miles with the same animal, gathering minerals, such as ores of iron of very great variety, copper, galena, and argentiferous lead, zinc of the finest quality, coal of several kinds, with granite, marble, lime and sandstone, breccia, and other geological material, which may hereafter be profitably worked for useful and ornamental purposes, which have since been forwarded to me, the variety and richness of which will show to any one at all familiar with such subjects the importance the great west and southwest will become, at no distant day, in the history of this country. This opinion I am sustained in by the examinations of many gentlemen well known to science and the world, who have done me the honor to call and examine them. I am indebted to the obliging and courteous people residing there for many kind offices and facilities afforded me in sending my collection from interior points to places on the river or other highways, and I take much pleasure in acknowledging their kindness and my obligations. And here I may remark, that a frank, open, and enlarged hospitality is everywhere characteristic of the settlers of Arkansas. Wherever I called at a house, however humble, for accommodation for the night, the reply was, "Alight and come in;" and I always found myself treated *better* than themselves, and I felt as much security in travelling as I should in any of the middle or eastern States. I frequently and fully told them that my object was to inform myself of the resources, mineral and agricultural, of their State, and to use that knowledge in making it known to enterprising and well-qualified emigrants. This announcement was always received by them with pleasure. The people generally are quite as intelligent and shrewd as persons filling similar positions in any part of our country, and any one who should go among them, expecting to find it otherwise, will soon be disabused on this point.

AGRICULTURAL AND HORTICULTURAL JOURNAL.

INTRODUCTION OF NEW PLANTS.

The seeds of another useful plant which has recently been introduced by the Patent Office are those of the Spurry (*Spirigula arvensis*), which, as a green manure, has been found most signally beneficial on poor, dry, sandy soils. It may either be sown in autumn, on the wheat stubble, or after early potatoes, and ploughed under in spring, preparatory to the annual crop; or it may be used to replace the naked fallow, which is often hurtful to lands of so light a character. In the latter case the first sowing may take place in March, the second in May, and the third in July, each crop being ploughed in to the depth of three or four inches, and the new seed then sown and harrowed. When the third crop is ploughed in the land is ready for a crop of winter grain. Green manuring, or the ploughing under of green crops in their living state, attracted the early attention of civilized men, and has been practised more or less from the time of Xenophon, who wrote about four hundred years before the commencement of our era. He recommended green plants to be ploughed into the soil, and even that crops should be cultivated for that purpose; for these, he says, "enrich the earth as much as dung." The lupin is named as an excellent manure by most of the early writers on agriculture, and is cultivated at the present day in Spain, Italy, Tuscany, and the south of France, for the purpose of being ploughed into the soil.

The ploughing under of green crops is directly opposed to burning peat, or turf, in regard to intention and effect, and is particularly serviceable where the basis of vegetable mould is to be increased. The soil manured by them receives all the vegetable food contained in the seed sown, the quantity of which in peas and buckwheat is not very inconsiderable. Some plants employed for this purpose, as peas, turnips, clover, &c., push down their roots into the soil far below the reach of the ordinary plough, and whatever nutriment they find there they suck up and bring to the surface in the form of green manure, and administer it to the growth other plants, as wheat, barley, oats, and rye; the principle being to enrich the soil by setting a quick growing plant to draw organic matter from the air, and inorganic from the sub-soil, and then ploughing it in. When the green crops are turned into the soil, besides enriching its staple with fertilizing matter, they promote the fermentation and decomposition of woody fibre buried near the surface, which is a useless incumbrance in an undecayed state, so far as any immediate effect is concerned. In general, they should be ploughed under, if possible, when in flower, or at the time when the flower is opening; for, in this age of growth, they contain the largest quantity of soluble matter.

For poor, light, and sandy soils, these manures do well; and also for poor clays, which, however, are much improved by having the subsoil burnt, or rather charred, with peat, spent tan-bark, saw-dust, apple pomace, or any other cheap fuel. And as green vegetable matters ferment, or sour, when undergoing decomposition, the land should be limed just before or soon after ploughing under the plants.

The vegetables grown for this purpose should possess the following properties in order to be cultivated with economy, and attain the desired end: 1st. They should flourish on poor soils; 2d, should require but little labor of cultivation; 3d, have cheap seed; 4th, be of quick and sure growth; 5th, stand all weathers and vermin; 6th, run their roots deep; 7th, bring up such inorganic matter from the subsoil as the succeeding crops require; 8th, should smother weeds; and 9th, should produce a large quantity of herbage that will readily decay in the soil.

[Union.

CULTIVATION OF THE SUGAR CANE IN THE EAST.

The following interesting paper was recently addressed to the officer in charge of the agricultural branch of the Patent Office, by the Hon. J. Balistier, who, it will be recollected, has spent many years in the East as United States consul at Singapore, and as a diplomatic agent of this government in other far-distant quarters of the globe :

WASHINGTON, May 17, 1855.

SIR : My attention was arrested sometime ago by a newspaper paragraph stating that one of our national ships had been sent to the island of Penang, in the Straits of Malacca, at the instance of some southern sugar planters, to procure a supply of sugar canes to be used as seed for their use. Subsequently, the same public channel gave notice of the arrival of the ship with the desirable supply of cane ; and, finally, more recently, while in conversation with you, I learned that the effort to introduce that species of cane had failed, in consequence of their decay in the homeward passage.

On this subject I beg leave to make some remarks, which may not be inappropriately laid before you in your official situation, which I the more readily do, as it may deter further attempt at bringing into our unsuitable climate the Salangor cane, which, from personal knowledge, I know to be almost exclusively planted on the sugar estates of Province Wellesley, the only sugar fields near Penang, for on the island itself there are no sugar plantations.

Province Wellesley, close opposite to Prince of Wales Island, commonly called Pulo-Penang, lays near the equator, in north latitude $5^{\circ} 20'$, and east longitude $100^{\circ} 30'$. The cane in question, where first it originated I know not, but it takes its name from the river and district of Salango, about 1° south and east of Penang, in the Straits of Malacca aforesaid. This cane, which is large and heavy, is unusually hard, and it requires the pressure of a powerful mill to extract its juice, which, be it allowed, is renowned for its saccharine properties. But the objection, which I judge to be fatal to it in any southern region of the United States, is that as under the equator as at Singapore, and near to it as at Province Wellesley, it does not mature undersixteen to eighteen months, it could be of no use for the purpose of making sugar, or even syrup, in Texas or Louisiana, where the regular order of the seasons requires the cane to be ripe and fit for being cut in ten months at furthest from the time of planting, and before the setting in of the frost.

After many years of personal experience of cane cultivation in the western and eastern hemisphere, I am warranted in stating that of all the varieties that have fallen under my observation, I have met with none that require so long a time to come to maturity as the Salangor, and I am equally warranted in declaring that whoever recommended its introduction into this country for a useful purpose could not have taken into account the shortness of our hot season, at the end of which this description of canes would be found to contain juice but very slightly sweet, and, consequently, unfitted for the use of our sugar planters.

But though the Salangor cane is not adapted to the requirements of the country for the reason above given, the same objection may not hold against another species of sugar-cane obtainable in the same locality, viz : Province Wellesley, Malacca, and Singapore, the three principal ports in the straits of Malacca, where it is cultivated under the name of *'t'eboo-tillor*, or egg-cane, because of the swelling between the joints, which gives it, according to the fancy of the Malays, an egg-like appearance there, *tillor* signifying egg, and *'t'eboo* a cane. This species is less robust and hard than the other, and is furthermore unlike it, being yellow when ripe, smooth and glassy, whereas the Salangor is deep green, and fuzzy on the outside. The *tillor* has the great advantage over the other of ripening and being fit for cutting in from ten to twelve months from the time of planting, which is considerably less than the time required by the West India, Bourbon, or Java red canes, so much esteemed in the east. If not possessed of the great saccharine quality of the Salangor, the *tillor* is nevertheless a profitable cane, as the juice extracted from it, with a moderate pressure of the cylinders, range from nine to eleven degrees, of Beaume's saccharometer, on good ground seldom falling below ten degrees, and it has the additional advantage of making returns in five to seven months less time than the other.

Now, it is to this variety of cane that I would beg leave to direct the attention of those interested in introducing changes which natural degeneration in most

plants renders necessary from time to time, and which experience teaches is as necessary to the sugar-cane as to any other vegetable production. Through our consular or private agents at Singapore or Penang supplies might be obtained by transmitting directions to have cuttings laid horizontally on a bed of rich earth, deposited to a considerable thickness in the bottom of a case of convenient size, for transportation. The case should be allowed to remain open for some days, in order to be able to observe if the cuttings, which have been slightly covered over with earth, throw out shoots, and if ascertained to be doing well, then an inch or two of additional earth should be laid upon them, and the glazed sides of the case should be closed and hermetically sealed, to exclude the atmosphere. The case, so closed, may be conveyed in perfect safety on a secluded part of the deck of a merchant ship to the United States during the summer, care being taken not to open the case or to break the panes of glass, and thus admit the saline air of the sea to them.

While on this subject, allow me further to bring to your notice the Chinese mode of sugar-cane cultivation, which differs from ours in placing horizontally the cuttings in a shallow drill, the cuttings having been previously tied up in bundles, and put by in a shaded place at the time of cutting down the field. The bundles are allowed to remain in this manner until within about ten days of planting time, when they are placed upright in a shallow pit, untied, and fenced all around the pit with rich earth, and slightly covered over with cane leaves. In about one week they throw out shoots from the sides, which, when about an inch long, indicate that they are ready for setting out in the drills aforesaid, and are then slightly covered with earth.

By this process a whole month is gained over the ordinary mode of sticking the cuttings into the ground, which usually renders about a third or a half of it unproductive, on account of the pressure of the ground upon that part of it which is buried, whereas by the Chinese process every eye is fully developed, and becomes productive, and, as before said, a whole month is gained, a boon of no little importance in the limited seasons of our sugar-producing country.

I have the honor to be, sir, your most obedient servant,

J. BALISTIER.

AGRICULTURAL DIVISION OF THE PATENT OFFICE.

INSECTS INJURIOUS AND BENEFICIAL TO VEGETATION.—One of the most important movements that has been made in this branch of the office is that of employing a gentleman to investigate the habits of insects injurious and beneficial to crops. The vast amount of benefit that must arise from such an inquiry is hardly perhaps appreciated by the great majority of persons; and yet it cannot fail to be the means of spreading most useful information among cultivators, and of adding to the productiveness of the soil and the wealth of the country by originating precautions and suggesting ideas for the more effectual protection of the productions of the fields and gardens from attacks of insects. The information we at present possess about them is so limited, and the methods suggested for destroying them so varied and ill-digested, that any step towards a more exact study of their habits cannot be too highly estimated. The gentleman chosen by Judge Mason, Commissioner of Patents, for this investigation is Mr. Townsend Glover, already sufficiently well known as an artist and naturalist of promising talents. He has been directing his attention to the subject with a devotion and enthusiasm which spring from a conviction of the importance of the task imposed upon him and a confidence of success. While studying the habits of insects he illustrates them, with a view of more accurately describing them; giving at the same time such remedies for their destruction or diminution as may be ascertained to be most effectual.

Mr. Glover is now turning his attention more especially to the insects pernicious and beneficial to rice, tobacco, the sugar cane, cotton, and the orange plant, and for that purpose left this city some days ago for Florida, in which State he expects to have such opportunities and facilities as his investigations demand. He has been also directed to discover, if possible, the cause of the *white-rot* in the live oak, and to ascertain the most probable remedy. During the past year he was engaged in watching the operations of the rice and cotton insects in the Carolinas, Georgia, and Alabama, as also those of the corn and grain insects of the middle and northern States, while he continued to direct his attention, at

every fitting occasion, to those insects which attack vines and fruit trees. To point out to the farmer the insects beneficial to him is in some measure to insure their protection from wanton destruction, and have their natural co-operation in aiding to secure from injury the fruits of human industry.

In the next annual report, now printing, will be found engravings prepared on stone by Mr. Glover of many of these insects. They will be carefully studied by all persons interested in agriculture; and, as the subject is one of no common interest, benefiting as it must do every portion of the Union, the efforts of Mr. Glover will be duly estimated by every agriculturist and obtain for him their hearty co-operation.

IMPORTANT TO COTTON PLANTERS.

An enterprising gentleman named G. R. Griffith has been perfecting an invention by which cotton may be got to market and the seaboard, in spite of low water in the southern rivers; and he left here this afternoon for the south to demonstrate the practicability of his invention to the planters. The plan is very simple, being merely the adoption of a kind of vulcanized India-rubber bag, so constructed that any number of them may be connected together in the fashion of a raft, and either towed down the shallow streams by a steamer of light draught or piloted by hands on the cotton, two men being able to manage one hundred bales. Twelve inches of water is amply sufficient for the transportation of cotton by means of these patent floaters; and if they can be successfully introduced, the condition of the streams hereafter will be no barrier to supplying the markets with the great southern staple. Mr. Griffith gave a practical exhibition of his invention at this port a few days since, and, I believe, entirely satisfied those present of the feasibility of the plan.

CAROB TREE, OR ST. JOHN'S BREAD.

Among the recent importation of seeds from Alicanti, Spain, says the Washington Union, were those of the Carob tree, the pods of which, when ripe, contain a few drops of a substance resembling honey. From this circumstance, it is supposed that this tree is identical with the one upon which St. John fed while in the wilderness, and hence sometimes is called St. John's bread. It blooms twice a year—at the end of January or the first of February, and about the middle of September—and, when well watered, grows to a considerable height and size, sometimes spreading to such a degree as to have a circumference of from two hundred to three hundred feet, and bearing upwards of a ton of pods. Young trees, only a year old, often have stems eight or ten inches thick, with branches ten or twelve feet long. Cattle, horses, and mules devour the pods with great avidity, and, if well fed upon them, will become extremely fat, or in good condition to work. This tree, doubtless, will succeed well in the southern, and, perhaps, in the middle States. Thus it is that the interest government takes in the success of the science of agriculture not only tends to improve the science at home, but collects the seeds of all climes to swell its own product.

SLAVE AND FREE NEGRO LAW OF THE DISTRICT OF COLUMBIA.

We insert, as of general interest to all of our readers, the negro laws of the District of Columbia. They are extracted from the very able and valuable pamphlet, prepared by M. Thompson, of the Washington bar, entitled "Abstract of the Laws of the District of Columbia."

SLAVES.—The act of Maryland of 1796, chap. 67, and act of Maryland of 1797, chapter 15, concerning the importation of slaves, are in force in the District of Columbia, although in terms they are applicable only to the State of Maryland; by which any slave brought into said district, for sale, or to reside therein, shall thereupon immediately be free: *Provided*, That any citizen of the United States, coming into said district with a *bona fide* intention of settling therein, may import, at the time of such removal, or within one year thereafter, and retain as a slave, any slave his property at the time of removal, if such slave, or his or her mother, have been resident of one of the United States three years next preced-

ing such removal ; and such citizens dying within the said year, their executors or administrators may bring in such slaves within one year after the said death, and also the issue of such slaves born after the removal of the person dying ; and this same privilege of importing is extended to the guardians of infants, entitled on such persons dying within one year after the removal, and to male infants so entitled after attaining the age of twenty-one, and to female infants after attaining the age of sixteen, and to include the issue, as in the case of executors ; such persons so removing not to sell or dispose of any slaves so imported, or their increase, unless they have resided in said district three years next preceding such sale, excepting dispositions by will, by law for debts, or in consequence of intestacy.

There is no law affecting the right of persons travelling or sojourning in said district with any slave, such slave not being sold or otherwise disposed of in the district ; but carried, or attempted to be carried, by the owner out of the district. Vide sec. 4, act of Maryland, 1796, chap. 67.

By act of Congress of 3d May, 1802, chap. 52, it is provided that Maryland slaves may be brought into the District of Columbia, and held or disposed of in the same way as practised therein prior to the cession of said district to the United States.

A slave brought from any place, except Maryland, into the District of Columbia, more than a year after his master, and sold, or to be sold, or to reside, is entitled to freedom. 1 Cranch, C. C. R. 276, 370. 2 Cranch, C. C. R. 373.

A slave imported into the District of Columbia for sale, and sold within three years after such importation, is entitled to freedom. 2 Cranch, C. C. R. 261, 373. 4 Cranch, C. C. R. 1.

A slave is not entitled to freedom from being hired to a resident of the District of Columbia for a limited time. 2 Cranch, 405. A slave does not acquire a right to freedom by being sent out of the District of Columbia for sale, and, not being sold, brought back, after eight or nine months' absence. 2 Cranch, C. C. R. 102. A slave carried from the District of Columbia by its owner, for a temporary residence only, and brought back and sold to a resident of said district, does not thereby become entitled to freedom. 2 Cranch, C. C. R. 418.

SLAVES OF NON-RESIDENTS.—The following tax is imposed upon slaves of non-residents hired to persons residing within the city of Washington, D. C., to wit : On every male slave above the age of eighteen years, and under forty-five, twenty dollars per annum ; on every male slave under eighteen and above twelve years of age, twelve dollars per annum ; and on every female slave between fifteen and forty-five years of age, two dollars per annum ; and any non-resident who shall hire a slave to labor, or do service in said city, without having first paid the above tax, shall forfeit and pay the sum of twenty dollars for every such offence ; and any person who shall hire any slave belonging to a non-resident, for whom the said tax is not paid, shall, in like manner, forfeit and pay the sum of twenty dollars for every slave so hired ; and if such person shall continue to employ such slave, so hired, he or she shall forfeit and pay the sum of five dollars for every month he or she shall continue to employ such slave.

Every person bringing or sending any slave into said city to hire or reside therein, shall, within twenty days thereafter, cause the said slave to be recorded on the books of the corporation, and shall deposit with the register an affidavit that such slave is *bona fide* his or her property ; and every person neglecting or refusing so to do, shall forfeit and pay the sum of twenty dollars. Corp. Laws, 255, 256.

SLAVE TRADE AND SLAVE DEPOTS.—Any slave whatever brought into the District of Columbia by its owner, or by the authority or consent of its owner, for the purpose of being sold, or for the purpose of being placed in depot, to be subsequently transferred to any other State or place to be sold as merchandise, shall thereupon become liberated and free.

The corporations of the cities of Washington and Georgetown have power, from time to time, and as often as may be necessary, to abate, break up, and abolish any depot or place of confinement of slaves brought into the said district for the purpose of being sold or transferred to any other State or place as merchandise. Act of Congress, September 20, 1850. Stat. at Large, vol. 9, 467.

FREE NEGROES AND MULATTOES.—Every negro or mulatto slave, who shall be manumitted or declared free in any manner or form whatsoever, in Washington city, D. C., and every free negro or mulatto who shall come within said city,

shall, within five days thereafter, exhibit to the mayor satisfactory evidence of his or her title to freedom, and enter into bond with one good and sufficient white freehold security, in the penalty of fifty dollars, conditioned for his or her good and orderly conduct, and a like bond and surety for each and every member of his or her family, to be executed in the same manner, conditioned for the good and orderly conduct of the person named therein, that he or she does not become chargeable to, or commit any offence against, said corporation, or against the laws of the United States; which bonds shall be renewed every year, on the tenth day of December, and on failure so to do he, she, or they, shall forfeit and pay a sum not exceeding twenty dollars; and he, she, or they, and also the persons for whom such failure shall occur, being minors, shall be ordered by the mayor to depart forthwith from the city, and on failure to do so shall be committed to the workhouse and be employed, at the discretion of the mayor, until such conditions shall be complied with; not exceeding six months in any one commitment.

And every negro or mulatto who shall be committed or declared free in any manner or form whatsoever, in said city, and every free negro or mulatto who shall come into said city, shall, within five days thereafter, and on the tenth day of December thereafter, annually record his or her name, and the name or names of every member of his or her family, on the books of said corporation, and at the same time pay into the treasury of said corporation for himself, herself, and each and every member of his or her family so registered, the sum of fifty dollars; and he, she, or they, failing so to do, shall forfeit and pay to said corporation a sum not less than ten, nor exceeding twenty dollars, and shall be ordered by the mayor to depart forthwith from said city; and failing to depart therefrom shall be committed to the workhouse, &c., &c., as above stated.

But there is no law to apply to, or affect the condition of, any free negro or mulatto who may come into said city in the service of any transient person or member of Congress, while in such employment, or who may have been sent to the city by his or her employer on temporary business. Corp. Laws, 252, 253.

EARLY STATE AND PROGRESS OF AGRICULTURE IN THE SOUTHWEST.

Several years elapsed, after the establishment of the French colony at Baluxi, before even the common vegetables of the garden were cultivated, and the sterile soil of the seashore was not calculated to invite a more extended culture, if the character and habits of the colonists, chiefly soldiers, deriving all their supplies from the mother country, had inclined them to such pursuits.

It was, therefore, not until the province came under the control of the Company of the Indies that the tillage of the earth became to any extent a fixed pursuit. The first impulse was then given to planting by the large grants to European capitalists, who sent out laborers to open and improve their lands.

The most efficient of these were German redemptioners; but the nature of the climate and the heavy labor of removing the dense forests rendered the progress of improvement tedious and discouraging.

It was soon found necessary to resort to Africa for suitable operatives for the prosecution of agricultural enterprise; these were introduced by the company, from time to time, to a limited extent, and disposed of to the colonists at established and moderate rates, payable in annual instalments in the products of the soil.

These products were naturally confined, for a considerable period, to articles of necessity for home consumption, and notwithstanding some large grants were made near Natchez and on the Yazoo, ostensibly for the cultivation of tobacco and indigo, and although some "large plantations, with extensive improvements," were established near the former place, it does not appear that anything beyond the spoils of the chase, or the peltries procured by traffic with the Indian tribes, was exported from the country.

By the massacre of the inhabitants by the Natchez, in 1729 and 1730, these establishments were broken up, and from this period the French were too much engaged in exterminating the Natchez, and in hostile incursions among the Chickasaws, to re-occupy and cultivate, advantageously, their regained possessions.

It was, therefore, under the occupancy of the country by the English that we trace the first germ of successful and systematic agriculture in Mississippi.

The emigration which ensued, on the change of rulers, being chiefly from the Carolinas, Virginia, Jersey, and New England, was from a class differing essentially in habits from their more volatile and restless predecessors, the French, who were more addicted to the chase and to trafficking with their Indian neighbors, than to more laborous and settled pursuits.

Many of these settlers were accustomed to agriculture, and being generally accompanied by their families, resorted at once to the tillage of the earth as a means of support.

Their cultivation was necessarily rude, and their implements few and imperfect; yet their products were varied and for the purpose of subsistence ample. Almost every article of prime necessity, which the soil could yield, was produced by them to the extent of their wants.* Cattle and swine required little other attention than protection from the bear and wolf of the forest, and were raised abundantly; whilst the small farms, frequently confined to a few acres, exhibited a variety of productions that is now rarely found together in the country. Indian corn, wheat, oats, rye, rice and potatoes, cotton, flax, tobacco, and indigo, were almost universally cultivated, but rarely, if at all, for exportation.

In the early stages of the settlement of the colony, many of the common conveniences of life were necessarily dispensed with, or supplied with such substitutes as ingenuity or skill could devise and fabricate from the productions of the country.

Not many years since, were to be seen the moulds in which the head of one of the most respectable and wealthy families of the present day was wont to cast the pewter platters and spoons which constituted the only *plate* of himself and neighbors. The inventories of the confiscated effects of some prominent, and, as then regarded, opulent persons, yet preserved among the Spanish archives, exhibit a simplicity of attire and furniture in strong contrast with that which would now satisfy those of very contracted means or humble station.

The scarcity and high price of iron, and the consequent imperfection of agricultural implements, was perhaps most felt and least easily remedied. At that period cut-nails were not invented, and the wrought-nail cost a dollar a pound. Tools and all iron implements bore a corresponding price, owing, in some degree, to the high freights on heavy articles up the Mississippi; the voyage from New Orleans to Natchez, made by keelboats and barges, requiring several weeks.

A set of plough-irons was, therefore, an acquisition of no little value. Iron entered into the composition of few of the wagons or carts, and the wheels were often made of a transverse section or disk sawed and properly fashioned from the trunk of a tree of suitable diameter.

These trucks constituted, to a considerable extent, the only means of transportation of heavy articles. Even as late as after the introduction of Whitney's saw-gin, a now opulent planter, a venerable and highly respected citizen, a native of Adams county, states that, in a wagon of this kind, he hauled his crop of cotton for two years to a neighboring gin; a frame-work of cane serving in lieu of plank in the construction of the body.

Not many years before, the same gentleman was reduced to the necessity of fabricating his only plough by framing a common mattock into a beam, that being the only implement suited to the purpose left on his plantation by the depredating Indians.

This was only about sixty-five years since, and occurred within ten miles of Natchez, and to an individual belonging to one of the most opulent and influential families in the country at that day.

Flax was raised chiefly for shoe-thread and similar uses, but in some families linen cloth was made.

Leather was commonly tanned throughout the country in large troughs dug out of the trunks of trees.

From the earliest occupancy by the English, cotton in small quantities, sufficient for domestic purposes, was habitually cultivated; it was of the black or naked seed variety, was planted in hills, and cultivated with the hoe. Fifty or sixty pounds was the ordinary quantity gathered in a day. The seeds were

* In 1775, Mr. Dunbar enumerates among the productions of his plantation rice, tobacco, flax-seed, indigo seed, corn, buckwheat, barley, peas, besides many other things.

picked out by the hand, or separated from the lint by means of the small roller gin. It was spun and woven at home, and constituted the chief apparel of the inhabitants; the small quantity of indigo then grown, and the numerous dye-stuffs that the forests afforded, supplied all the coloring materials required for dyeing cloth.*

Rice formed an important article of diet, supplying largely the deficiency of flour; the colonists, especially the French, accommodating themselves slowly and reluctantly to bread made from the Indian corn. It was prepared by pounding in common wooden mortars, and perhaps was not as fair as that which we now purchase, but of far richer flavor and more nutritious.

In the absence of mill-stones, when they could not be obtained, the Indian corn was reduced to meal by pounding in the same way.

Large herds of cattle were owned by the more opulent inhabitants, for which the garrison at Natchez afforded the chief market, and some were driven to New Orleans shortly previous to the change of government. The price of common stock cattle was about the same then as at this time.—*Wales' Geological, etc., Report on the State of Mississippi. Lippencott, Grambo & Co. Philadelphia, 1855.*

AGRICULTURAL MEMOIR.

* *Resolved*, That the secretary of this society be, and he is hereby, requested to prepare a memoir on the subject of the Santee Long cotton—its quality and its capacity of improvement for finer fabrics—the nature and quality of our soils—the adaptation of different manures and composts, and especially the applicability of *calcareous manures to our pine-land*; and the capacity of our common soils for other agricultural products than cotton.—*Black Oak Agricultural Society*

In compliance with the above resolution, the secretary of the Black Oak Agricultural Society submits to your honorable body the following remarks on the different subjects referred to in that resolution.

The position which the State Agricultural Society holds as the representative of the great agricultural interest, makes it also the organ of communication between the different sections of our State. The auxiliary societies may thus be brought to act more in concert, and by free intercourse and interchange of opinion on the diversified soil and products of our country, on the custom and practice of each section, and the state of agriculture generally, be the useful means of developing our resources, and promoting the great object for which they were formed.

We, therefore, lay before you our practice and the condition of our agriculture; and, through you, we invite the other societies to co-operate with us and contribute towards so useful an object.

We begin with the "*Nature and quality of our soils.*" The region of the Santee Long cotton commences at the head of tide-water on Cooper river, extends across the country to the Santee river, and above, as high as Vance's ferry. Within these limits are embraced the head-waters of Cooper river, which extend to within a few miles of the Santee, intersecting the country in different directions, and forming along their courses large swamps, formerly cultivated in rice, but abandoned after the introduction of cotton, for the more profitable cultivation of the highland.

In the neighborhood of these streams are some of the best cotton lands. In their virgin state they contain a growth of oak, dogwood, &c., generally intermixed with the short-leaf pine, indicating the proximity of lime-stone to the surface. They are well adapted to the cultivation of the black-seed cotton, and comprise the principal portion of the Santee cotton-lands. Bordering the different swamps which intersect the country, they extend to various distances; in some places composing the entire highland between contiguous streams; in other places, extending to the ridges which separate the head-waters of the more remote streams.

Another class of lands which have been found well adapted to the culture of black-seed cotton is that of "mixed growth," containing the pine, with an undergrowth of gum, oak, &c. These lands have a large portion of clay near the surface, and are highly improved by the application of compost manures. There is a gradual and progressive change observable in the forest growth of these lands.

* The first indigo made by Mr. Dunbar was by steeping it in barrels.

Whenever the pine has had possession for any length of time, and fires are excluded, a young growth of oak, hickory, gum, or of some other plant which indicates good land, invariably springs up; and at the time the pines are disappearing from old age, this second growth is ready to take possession of the soil. Thus a tract of country which would now be classed as pine land might, in the course of 30 or 40 years, become of "mixed growth;" and in a half century after, when the pines had entirely given way to the undergrowth, would be designated as oak and hickory. So, also, when an oak forest is declining from old age, a young growth of the same tree can never flourish; but when cleared and thrown out of cultivation a growth of pine invariably follows. These changes are all consistent with Liebig, and other agricultural chemists, that, as different plants require different alkaline bases for their full development, a soil which has for a long time been supporting a certain kind becomes exhausted of those ingredients necessary to that plant, and is thereby rendered unfit to maintain a young growth of the same; but another plant which requires less, or of a different kind; may find a sufficiency. In this condition the land is partly in a state of forest, and, from the gradual and continual disintegration of the soil, is preparing another supply of food for its former tenants.

The pine forests in this section of country are extensive. They generally form the ridge-lands which separate the head waters of the more remote streams, and vary in texture from light sandy soil to dark clay loam. Those of the former description will never repay the trouble of clearing and cultivation; the latter, when capable of being drained, have been found productive.

The inland swamps, formerly cleared and cultivated in rice, but now abandoned and used only as pasturage grounds, comprise a large body of the lands in this section of country. They are formed by the tributary streams of the Santee and Cooper rivers, and vary in extent as well as in the texture of their soils. The ridge land which separate the waters of the Santee and Cooper rivers approach within a few miles of the former. Of course, the streams which enter the Santee are few. The branches of Cooper river traverse a distance of 15 or 20 miles, the swamps becoming wider until they unite at the head of tide-water, to form the valuable rice-lands of Cooper river. Below the alluvial deposits of these swamps is generally found calcareous earth—either in the form of rock, limestone, or in a friable mass, intermixed with variable proportions of sand and clay. These beds of calcareous earth, in many situations, may be obtained with little labor; and when the proportion of lime they contain is in sufficient quantity to repay the cost of digging, may be used with decided benefit to supply an ingredient to our highland soils, in which they are all deficient.

On the "*applicability of calcareous manures to our pine-land.*"—It has long been observed that the growth on the land invariably indicates the proximity of limestone to the surface. Thus, on the fertile lands bordering the swamps, where the growth is composed of the red-oak, dogwood, poplar, and short-leaf pine, limestone may always be found within 8 or 10 feet of the surface. On the contrary, wherever the long-leaf pine predominates it is never found at the ordinary depth of wells. At the Eutaw Springs the limestone is on the surface; and in the pine-land, three miles distant, wells have been excavated to the depth of 50 feet without reaching it. In this respect it only follows the order of other stratified rocks, cropping out in some localities, and in others far buried in the bowels of the earth. The extent of the fossil limestone strata has not been precisely defined. It is believed, however, to be continuous from Virginia, southward and southwestward, as far as Alabama, including the whole country between the falls of the rivers and the sea.

From specimens which have been analyzed by Professor Shepard* the limestone of this section of country varies from 87 to 94 per cent. carbonate of lime.

The term marl is now generally applied to these fossil remains when they are in a finely comminuted state, and form, by the admixture of sand and clay, a friable mass.

The *beneficial effects of calcareous earth*, by which I mean the carbonate of lime, (mild lime,) when applied to land deficient in that ingredient, have been proven beyond the shadow of doubt. A series of experiments, conducted by Mr. Ruffin, of Virginia, for a period of upwards of twenty years with accuracy, and under a variety of circumstances, on different soils, and in various quantities, have placed

* S. S. March N. S. Southern Cabinet, for 1840.

the highly useful qualities of this manure beyond dispute. The revolution it is now effecting on the almost exhausted lands of lower Virginia is the best evidence of its fertilizing qualities. If lime has failed on some soils of producing any good effect, it differs not in that respect from many other mineral manures which are acknowledged to be valuable. Gypsum and the nitrates, in certain localities, have produced wonderful effects upon vegetation, in others they have failed entirely. But, although the modus operandi of lime and its salts has not yet been thoroughly investigated, chemical science has unfolded enough to guide us to some useful results, and to warn us from some errors.

Lime is never found, in nature, in any uncombined state; its affinity for the acids being so strong, and carbonic acid the most generally diffused, it is usually found as a carbonate in the form of limestone, marble, or chalk. When this carbonate has been subjected to white heat for a length of time the carbonic acid is expelled, and the lime is found to have lost nearly 44 per cent. of its weight. It is then quick-lime. On exposure to a moist atmosphere it gradually falls into powder; or this may be caused immediately by the addition of water, when it becomes slaked lime. In this state it is a combination of lime, with about one-third of its weight of water, and is what the chemists term hydrate of lime. When hydrate of lime, or slaked lime, is exposed to the air it gradually absorbs carbonic acid until it has regained that which it lost from its burning, (nearly 44 per cent. of its weight,) and then becomes carbonate of lime again.

From some of the known qualities of lime and its carbonate, we may judge of its probable effects under certain circumstances. Thus, quick-lime cannot long remain exposed to the air, or in contact with the organic matter of the soil, without absorbing carbonic acid from one or the other. When applied, therefore, to a soil in which there is much inert, innutritious vegetable matter, it effects a partial decomposition of the vegetable matter, abstracting a sufficient quantity of oxygen and carbon to convert it into a carbonate, thereby causing new transformations and rendering those inert substances more soluble and nutritious as the food of plants. On the contrary, when applied to soils which already contain nutritious matter in the form of composts, or decaying vegetable substances, the same chemical influence is exerted; it becomes a carbonate at the expense of the carbonic acid of the compost manure; but, in doing this, it robs the soil of its most valuable ingredient.

On this account quick-lime should be cautiously used, and with a full knowledge of its effects. It should never be applied to lands in which the vegetable matter is in a state of decay and fit for the food of plants; but soils which are known to contain sufficient vegetable matter and are still unproductive—low grounds, which cause the rust and blight, but which show, evidently, in their color and texture, the presence of organic matter—would probably be improved by the cautious use of quick-lime.

When the carbonate of lime, or marl, (the valuable ingredient in marl being the carbonate of lime,) is applied to land, no such chemical effect as that which follows the application of quick-lime is produced; for the lime being already saturated with carbonic acid, requires nothing more from the organic matter of the soil. Now, does this carbonate of lime, or marl, possess any specific quality as a fertilizer, or does it exert its beneficial influence in a variety of ways?

Let us now consider its mode of action:

1st. All writers on agriculture, and all practical men who have used it, agree that lime acts mechanically upon the texture of the soil, rendering stiff clay-lands lighter and more porous, and sandy lands more compact and adhesive. Indeed, European writers class calcareous earth as one of the common ingredients of all their fertile lands; but in America it has been found in but few.

2d. When, in 1832, Mr. Ruffin published his essay on Calcareous Manures he attributed their fertilizing power to the property of combining with some noxious acid in the soil and neutralizing its effects; and from the invariable growth of sorrel (*Rumex acetosa*) upon such soils as he found highly susceptible of improvement by the application of calcareous earth, he inferred that this noxious acid was the oxalic. Now, oxalic acid is found in the juices of the sorrels, in the leaves and roots of rhubarb, and other plants, in the same way that the tartaric acid is found in the grape, and the critic and malic acids in the raspberry and strawberry, generally combined with lime or potash. After the death and decay of the plants these compounds are subject to the same process of decomposition

which attends other vegetable substances. We might as well expect to find any other product of the organic structure existing in a soil as oxalic acid.*

But chemists have discovered other acids in soils and of a more permanent character. Such are the humic and crenic acids. They are the product of the decay of vegetable matter and exist in most soils. With lime the crenic acid forms a soluble salt, (Dr. Jackson,) and the humate of lime is also sparingly soluble, (Liebig.) Dr. Jackson says that crenate of lime is generally found in the subsoil; and he adds: "On this depends the theory of subsoil ploughing." But these different substances, and their mode of action upon the soil, has not yet been thoroughly investigated by chemists. Until then, practical agriculture can derive no positive benefit from their discovery.

3d. Calcareous earth acts chemically upon the soil in forming new combinations. Sir H. Davy mentions, in his lectures on agricultural chemistry, that a soil which has always proved unproductive was submitted to him for examination. Upon analysis he found it to contain sulphate of iron, (copperas,) and recommended the application of lime. A new combination was thus effected; the noxious ingredient was rendered harmless, and another salt, sulphate of lime, (gypsum,) was formed, by which the soil was made fertile.

4th. According to Liebig, and other chemists, phosphoric acid exists in all soils capable of cultivation.—*Ag. Chem.*, p. 200. In combination with lime it forms an ingredient of the ashes of a number of plants and trees. Of the bones of graminivorous animals, phosphate of lime forms about 50 per cent.; of course, this is all derived from the soil, in the shape of vegetables, and the grasses which serve as their food. Lime, in some form or other, has been found in the ashes of most plants. Davy found sulphate of lime in the ashes of clover and the cultivated grasses. Dr. Dana states that the pollen of the *Pinus abies* contains 3 per cent. of the phosphates of lime and potash. On the same authority the phosphates of lime and magnesia are found in the ashes of cotton and tobacco.†

Whenever lime is found in the ashes in the form of a carbonate it must have been combined with the juices of the living plant. During combustion the vegetable acids are decomposed, and carbonic acid, which is always formed in the process, unites with the lime. The presence of lime in the ashes of nearly all plants shows the important part it plays in the economy of vegetable life.

The foregoing remarks would, then, lead us to the following conclusions, viz :

1st. Quick-lime, or lime after it is slaked, but before it becomes carbonated, should only be applied to soils which contain a large portion of vegetable matter, or where this vegetable matter is in an inert state, and is to be partially decomposed before it can become fit for the food of plants. It should not be used on lands which contain nutritious matter in a state ready to be taken up by plants; because, when in contact with lime, the manure is deprived of its most valuable part, viz : the carbonic acid.

2d. Carbonate of lime, marl, or calcareous earth, appears to possess many valuable properties as a manure. It improves the texture of the soil—making sandy lands more compact, and stiff clay lands more porous. Coming in contact with any noxious acids that may exist in the soil it unites with them and forms salts of lime, which either improves the land or are harmless. When applied to lands which contain phosphoric acid it forms phosphate of lime, a valuable manure.

These different salts of lime, and the agency they exert over the vegetable kingdom, may tend to explain, in some degree, the fertilizing effects of calcareous earth on certain soils, and for certain plants.

Judging, therefore, of the probable effects of lime and its carbonate from the foregoing facts, there could be but little doubt, theoretically speaking, of its being a fertilizer of all soils deficient in that ingredient. Mr. Ruffin and the planters of lower Virginia have answered the question practically; and, as evidence of the high estimation in which it is held, point us to their practice and the rich return it yields them. With respect to its applicability to our pine land, taking Mr. Ruffin's experience for our guide, there can be no doubt, as his experiments

* On this subject Professor Johnston remarks: "It (oxalic acid) is not known to exist in the soil or in the waters which reach the roots of plants. Where it is found in living vegetables, therefore, it must, like the other substances they contain, have been formed or elaborated in the interior of the plant itself."

† Dr. Dana also states that the diseases ergot and smut show free phosphoric acid. Lime and its carbonate would both correct this defect and form a valuable ingredient to the soil—phosphate of lime. The same application would probably prevent the rust in cotton.

were chiefly confined to the pine land. But all our highlands, even the best, are deficient in calcareous earth and would all, probably, be improved by it.

On the adaptation of composts and manures.—In order to proceed understandingly in the application of manures, we should first ascertain what it is that plants require for their nourishment—in what form it should be presented to them—and, finally, in how much do the different manures that are applied to lands supply them with their proper food. And here we must make use of the lights which science has shed on our subject. The chemist, the vegetable physiologist, and the botanist, and the geologist, have all labored for us. They have amassed a store of information for agriculture—they are ready and anxious to offer their assistance. Shall we reject their proffered aid and be content to grope our way blindly, satisfied with the little amount of experience which each one can acquire in his own limited sphere? Agriculture can, then, never hold that rank among the sciences to which her importance entitles her. This cautious distrust of all innovations upon old customs is useful in a certain degree; but practical men have suffered their prejudices too long to stand in the way of their advancement. From the operation of this cause, agriculture has not reaped the full benefit of their discoveries. But scientific men are now turning their attention to the application of chemical truths to a practical system of husbandry; and, if differences of opinion still exist, it is no more than may be expected of a subject yet in its infancy and so complicated in all its details. But much is already known, and of that we may avail ourselves, in as far as it will assist us.

From the analysis of plants they are found to consist of a few elementary bodies—carbon, oxygen, hydrogen, and nitrogen, and a few earthy metallic bases, as potash, soda, lime, magnesia, &c., which are found, after the plant is burnt, in the form of ashes. Of these few simple bodies the entire vegetation of the globe is composed; and the difference of form, habits, and structure, and the infinitely various properties of plants, are merely the result of varying proportions of these few simple constituents, or the absence of one or more of them. The inquiry then arises, whence, and in what form, are these bodies taken into the plant?

1st. *Carbon.*—It is now the generally received opinion of chemists and scientific men that plants obtain their carbon partly from the carbonic acid, which is always a constituent of the atmosphere,* and partly from that in the soil arising from the decay of animal or vegetable matter, and that it is taken into the plant through the leaves and through the roots. The carbonic acid is decomposed by the leaves under the influence of light, the oxygen liberated, and the carbon retained.

2d. *Oxygen and hydrogen* are supposed to enter the plant in the form of water, which is then decomposed and these elements furnished to the plant. Oxygen is also supplied from the atmosphere, and from the carbonic acid which is taken up and decomposed by the leaves.

3d. *Nitrogen.*—On the authority of Liebig, Johnston, and other chemists, ammonia and other nitric acids are the principal sources of the supply of nitrogen to plants. They are supposed to be received up through the roots and to be decomposed in passing through the organic vegetable structure.

4th. The earthy bodies which compose the ashes are taken up only in solution by the roots. For their supply, therefore, plants are dependent entirely upon the soil upon which they grow.

Let us now examine the system of manuring usually pursued with respect to the economy of collecting the materials and their fertilizing effects.

Compost manures.—The compost manures are made up of litter of all kinds from the woods, long and short-leaf pine straw, oak leaves, &c. Of these the long-leaf pine straw is the least valuable, on account of its resinous matter, which is antiseptic and requires a longer time before it reaches the proper state of putrefaction. Now, whether we adopt the opinion of European chemists, that it is only in the form of carbonic acid that this vegetable matter furnishes food to plants, or whether it is in the form of soluble geine, as some American writers have contended, it can make but little difference, as far as the compost heap is concerned. They are both the product of the decay and decomposition of vegetable matter, and as soon as that state commences the compost heap is in the proper condition to furnish food to growing plants.

But, besides their vegetable matter, the leaves of plants contain a large portion

* The atmosphere contains about 1-2500 of its bulk of carbonic acid.

of soluble salts, (*Liebig's Org. Chem*, p. 161.) These salts are not disengaged, however, until decay has proceeded so far as to break down the vegetable structure completely, and raw composts are never allowed to remain unemployable so long, their agency is always secured.

The animal excrements contained in compost manures, whilst they assist and hasten the decomposition of the vegetable matter, contain in themselves highly fertilizing ingredients in the form of soluble salts and ammonia. When exposed for any length of time to the sun and rains most of these valuable ingredients are lost. The soluble salts are dissolved and carried down into the earth; the gaseous parts are dissipated in the air. The great desideratum, then, is to economize and secure them. For this purpose a close retentive soil should be selected, or, what would be preferable, a layer of clay or swamp-mud should be spread at the bottom of the litter-pens. This would prevent the escape of the soluble matter. A covering over the pen would protect it from the effects of sun and rain; but if this is impracticable, another layer of clay or swamp-mud should be spread over the surface as soon as, or just before, fermentation commences. This would arrest all gaseous substances and would itself become a valuable part of the compost heap.

When it is remembered that the most valuable ingredients of the compost heap are those most easily lost, viz: the soluble salts and the volatile ammonia, is it not the dictate of ordinary prudence to secure these matters and not, by neglect, suffer the labor of the whole year to be lost?

The manures made in our stables and cow-pens may be said to contain the following constituents which furnish food to plants, viz: carbonic acid, formed during the gradual decay of the vegetable matter; potash, and other alkalies contained in the leaves; ammonia, which is the result of the decomposition of the urine; phosphate of lime, magnesia, and soda, and carbonate of lime and potash, from the solid excrement.

The question, then, of the adaptation of these manures is dependent on our knowledge of their constituents, and a knowledge of the constituents of the particular plant to which we wish to apply them. The manure from the stable is always more fertilizing than that from the cow-pen, because the excrements of the horse is richer in salts than that of the cow. So, also, wheat, which contains a larger portion of gluten than any other grain, is more sensibly improved than any other by the addition of animal manure, because it furnishes the nitrogen, an essential ingredient of the gluten. It is evident that when we ascertain the constituents of different plants we then know what it is they require for their well being; and, if the soil is deficient in any of these ingredients, we must supply them by means of manures.

Cotton seed has always held a high rank among the meliorating manures, and to its fertilizing effects every planter who has used it will bear testimony. It is the practice, in this section of country, to apply it to small grain, or the provision crop, and always with decided benefit. To what peculiar property its good effects on a crop are to be attributed has not been determined with any certainty. Experiments have proved that an equal bulk of the living seed is more beneficial than one of dead seed; and it has hence been conjectured that its effects were owing to the oily matter contained in the living seed. But we know that even when allowed to germinate and grow to the height of three or four inches, and when all the oily matter must have been expended in giving nourishment to the young plant, it still has a beneficial effect on a crop. It will, therefore, require further and more accurate experiments to prove that its good effects are alone attributable to that cause.*

* During the germination of all seeds there is a substance generated which chemists have called diastase. It possesses the property of dissolving starch, and, after a while, of converting it into gum, and then into sugar. Its purpose seems to be to prepare the inert, insoluble starch of the seed to be taken up by the young embryo, and of forming the compounds gum or sugar, as the necessities of the plant may require. It contains nitrogen, and when allowed to decompose among other products yields ammonia.—(Johnston.) If, then, cotton-seed be applied to a plant as manure, and it be crushed as soon as germination commences, the vital energy is destroyed, and the diastase formed during germination is ready to decompose and yield ammonia to the living plant. The other substances, also, in whatever stage they may be, undergo decomposition and furnish carbonic acid to the roots.

This theory of its action is merely thrown out to solicit inquiry and induce experiments. The matter may be tested by treating some plants with the living seed, crushed to a powder, in which all the oily matter would still remain, and others with the seed allowed to germinate and then destroyed.

Mineral manures—Gypsum, (sulphate of lime.)—This manure has not been used to any extent in this section of country. It has been applied to cotton by a few individuals, and, generally, with decided benefit; but the experiments were not conducted with sufficient care, nor were the results noted accurately enough to make them of value for reference. Where it is successfully used there is perhaps no manure that has produced such wonderful effects as gypsum.

It is said to show its influence more decidedly on clover and the cultivated grasses than on any other crop; and, when it is remembered that these plants contain in their ashes sulphate of lime, it is readily accounted for.

Liebig says: "The striking fertility and luxuriance of a meadow, upon which it is strewed, depends only upon its fixing in the soil the ammonia of the atmosphere, which would otherwise be volatilized with the water which evaporates."

The ammonia present in the atmosphere is always the carbonate; when, therefore, it comes in contact with sulphate of lime, a mutual decomposition ensues, and two other salts are formed—sulphate of ammonia, which is not volatile, and carbonate of lime. And to the presence of this sulphate of ammonia, according to Liebig, is the luxuriance of vegetation owing. Professor Johnston (*Lect. on Ag. Chem.*) does not admit that to this cause only is the effect of gypsum to be attributed. He contends that it plays an important part in furnishing the inorganic earthy food to plants, which is as necessary to their well being as carbon, or any other constituent. And his reasoning derives additional force from the fact that gypsum is specially adapted to such plants as are known to contain that salt in their ashes.

The quantity recommended to be applied is from 2 to 3 cwt. per acre.

Wood ashes.—Until of late years the subject of the inorganic part of plants, the ingredients of the ashes, had excited but little notice, and no application was made of a knowledge of their compounds to practical agriculture.

As late as 1813, when Sir Humphrey Davy published his Lectures on Agricultural Chemistry, he attached but little importance to these earthy constituents as the food of plants. He considered their agency as more mechanical in giving absorbent powers to the soil, or in improving the texture with regard to its capacity of retaining the heat of the sun. In the hands of Liebig, Johnston, and others, it has become a subject full of interest; and, on their authority, a knowledge of its application is of the utmost importance in forming a truly fertile soil.

From analysis it is found that different plants, and even different parts of the same plant, contain in like quantities of alkaline bases.*

On a proper application of this knowledge depends, in a great measure, the principle of the rotation of crops. Nature, when left to herself, shows the necessity of such a course in the gradual and progressive change of the forest growth from one kind of tree to another, and in the succession of grasses and weeds which spring up on fields thrown out of cultivation.

On this subject Professor Lindley remarks: "When it is said that a plant becomes tired of the soil, and we find that manuring fails to invigorate it, the destruction of alkalies in the soil, and the want of a sufficient supply of these bases in the manure, seem to offer a solution of the enigma."

We know that when the sweet potato has been planted for more than two or three years on the same land, and the vines cured and removed as fodder, the application of cow-pen manure alone cannot keep up the productiveness of the land, although laid on ever so liberally. If an analysis be made of the potato root and vine it will probably be found to contain some base necessary to its existence which is not supplied by that kind of manure.† The value of ashes must depend

* Johnston gives the constituents of *grain of wheat and wheat-straw*, thus:

Potash	19	.....	½
Soda	20½	.....	¾
Lime	8	.....	7
Magnesia	8	.....	1
Alumina	2	.....	2½
Silica	34	.....	81
Sulphuric acid	4	.....	1
Phosphoric acid	3½	.....	5
Chlorine	1	.....	1

100

100

† The surprising results which are sometimes obtained from the use of a very small and apparently insignificant quantity of mineral manures show the very important part they perform in the economy of vegetation. The facts are strictly in accordance with the theory of their action. From Scudder's table of analysis we find Indian corn thus constituted

very much on the kind of wood from which it is procured, and on the plant to which it is intended to apply it. Thus, the ashes of the oak would be the best that could be applied to the living oak; for then it would have those earthy constituents it requires presented in the exact proportions, and in a fit state to insure a healthy and vigorous growth, without waiting to obtain them from the gradual and slow disintegration of the soil. The same is true of any other kind of plant; hence the necessity of listing in the old corn and cotton stalks, and thus restoring to the land a portion of the inorganic food which had been taken up to maintain the previous crop.

This subject is one full of interest to the planter, and may tend to explain many things which, to him, would be otherwise inexplicable.

Wood ashes has been long in use in European culture and in the northern States. It has been used in this section of country, the present summer, in cotton, at the rate of 10 to 20 bushels per acre, and with a promise of increased production to the crop.

The nitrates.—The nitrate of potash (saltpetre) and the nitrate of soda, besides furnishing to the plant the ingredients of its ashes, also contain a most valuable element, nitrogen, which they yield to the plant in the form of nitric acid. These, and some other salts that have been highly spoken of in European culture, are, however, at present, too costly to be used on an extensive scale, unless by actual experiment they are found to remunerate sufficiently to make their use profitable.

The Santee Long cotton.—As stated before, the Santee Long cotton is confined to the region of country embraced between the head of tide-water on Cooper river and the Santee, and extending above along the Santee as high as Vance's ferry. The long staple or black-seed cotton, cultivated within these limits, has long been known in the market as the Santee cotton. Within the past 8 or 10 years, from the introduction of the finer seeds of the Sea Islands, the Santee cotton has lost that distinctive character it formerly possessed. Like the Sea Island cotton, it has become more of a fancy article; dependent very much upon favorite brands and particular qualities of seed. From the great facility with which the different species impregnate each other an almost endless variety has been produced; differing either in the shape or color of the leaf, the color of the flower, the shape of the pod, the texture and color of the wood, or the appearance of the seed. Like the rose and dahlia, the varieties have been so much multiplied that it would be as easy to define the quality of the one as to fix the distinctive color of the others. Until the past year the average price of Santee cotton has generally been about three times that of Uplands. During the past season they fell under that proportion.

The cotton of the Sea Islands, for fineness of texture and length of staple, have *always held* the first rank in the market. This difference has been generally attributed to the influence of the saline atmosphere in which they grew. From their proximity to the ocean there is every reason to believe that it does exert

Constituents of 100 parts of ashes.

	Ashes from 1,000 parts of the dry plant.	Soluble salts.	Earthy phosphates.	Earthy carbonates.	Silica.	Metallic oxide.	Loss.
Indian corn in tassel.	81	69	5	0.25	7.5	0.25	17

From the fact of these earthy ingredients being always found in the ashes of the Indian corn, and almost invariably in the exact proportions above stated, it is evident that they are necessary to a healthy growth and full development of the plant, and that the soil must contain them in some quantity or the plant cannot live. Now, suppose an acre of land to contain organic matter enough to furnish the carbon, oxygen, hydrogen, and nitrogen necessary for the production of 40 bushels, and also, that there is inorganic matter enough to supply such an amount of vegetation with the soluble salts, earthy carbonates, silica, and metallic oxides that are required. Suppose, also, that the quantity of earthy phosphates present in the soil is only sufficient for 10 bushels, the phosphates being an essential constituent of the grain, it is evident that, although there may be a large growth of stalk and blade, but 10 bushels of grain can be brought to perfection. Now, by the addition of a small quantity of bone dust, sufficient to furnish the earthy phosphates, the surprising result would be obtained of an increase of 30 bushels per acre from the application of a few pounds of manure, apparently insignificant of itself, but sufficient to bring into action a vast amount of nutritious matter, which, without it, would have been useless.

such an influence, for as the cottons recede from the sea shore they deteriorate in quality. A like change is observable in other plants which grow within the influence of the salt water. The glasswort, (*salsola soda*,) when it grows in inland situations, affords potash; when it grows in the sunshine it yields soda in its ashes.—(Davy.) Whether those who plant beyond the reach of this saline atmosphere will ever be able to supply the food so essential to that length and fineness of staple, possessed only to the Sea-island cotton, is a problem yet to be solved. A chemical analysis of the finer and coarser cottons would show in what they differed, and the deficient ingredient it may then be in our power to supply.

On the capacity of our common soils for other agricultural products than cotton.—Our situation, as regards climate and cheapness of labor, gives us advantages over most agricultural nations. Owing to this cause the southern part of our State, and the sea-board of Georgia, have met with but little competition in the rearing of the finer qualities of cotton. We have been devoted so long, however, to our favorite staple that we are as yet, in a great measure, ignorant of our own resources. Mr. Perrine, whose untimely death was a loss to the country, was engaged in the introduction and acclimation of tropical plants in Florida. That his labors would have been crowned with success there is reason to believe. It is worthy of remark that our three great staples, rice, indigo, and cotton, and the favorite sweet potato, were all originally natives of a tropical region. It would be an achievement of which a patriot might be proud if, in the course of a whole life, he could present his country with one object of culture as beneficial as these have been.

Rice was formerly cultivated in our inland swamps and the Santee swamp, and might be again resorted to with profit. To this we shall refer in speaking of the history of the rice culture in our swamps.

Indigo was, for a period of 40 or 50 years, the staple product of our State. It was introduced into Carolina from the West Indies, about the year 1742; and shortly before the war, according to Dr. Ramsay, the export had risen as high as 1,107,660 pounds. During the war more attention was paid to rice; and shortly after, about the year 1771, East India indigo came into competition, and from its superior quality, being the product of a tropical region, so lowered the price of Carolina indigo in the markets as to render its culture unprofitable. Cotton was then introduced and has been the favorite staple since that time.

Now that the *morus multicaulis* fever has passed away and left sober reason to herself again, the silk culture has strong claims on our notice. There is no reason to doubt that it may be successfully reared, particularly in the southern States, where the climate is so mild as to obviate the necessity of artificial heat. By the census statistics of 1840, Massachusetts, in 1839, produced 198,432 pounds of silk cocoons. From the report of the Commissioner of the Patent Office it appears that "the quantity of raw silk manufactured in this country, the past year, is estimated at more than 30,000 pounds." The report goes on to state that "the amount of silk-stuffs brought into this country, in some single years, from foreign countries is estimated at more in value than \$20,000,000." This is equal to one-third of the whole cotton crop of the United States, valued at \$62,000,000. One of the great advantages of this culture over all others is, that it may be undertaken by persons of limited means, and occupying but six or seven weeks in the spring months, it would not interfere, in our climate, with the cultivation of any crop after the first of May.

Tobacco and wheat might also be cultivated with profit in our State. Wheat was formerly cultivated very extensively in the middle and upper country, and the soil there would probably be better suited to that plant than the lighter soils of the low country.

The *palma christi*, or castor-bean, from which the castor oil is made, grows luxuriantly in our climate. From this oil stearine has recently been extracted, an article of which candles that are a good substitute for spermacetti may be made.—*Report Com. of the Patent Office.*

But all these different products of cultivation that innovate upon old customs will be slowly received; their introduction must be the work of time. The farmer is proverbially distrustful of all novelties, and he requires the strongest evidence of a profitable investment before he can be induced to abandon his accustomed occupation. Such, no doubt, was the feeling upon the early introduction of cotton into our country. It is related of a worthy old gentleman of

this parish*—one who had served his country with honor “in the times that tried men’s souls,” and was afterwards twice called to accept the highest gift of our State—that, actuated with a laudable desire of promoting the agricultural interest, he introduced the cotton-plant from Georgia as an experiment. At the time for harvest the fruit of his labor was nowhere visible; but upon search it was found concealed among the high grass which had taken possession of his field. Many, no doubt, were the prudent forebodings of anxious friends that this novel cultivation could come to no good. But even on those very lands it has yearly yielded its rich return; and now this despised little plant has become the very life-blood of the great nations of the earth, by its mighty pulsations diffusing health or disease, vigor or infirmity, through its giant frame.

On the former cultivation of rice in our inland swamps.—It has been stated before that the swamps forming the tributary branches of Cooper river are extensive. Most of these, and large portions of the Santee swamp, were cleared and cultivated in rice before the introduction of indigo. The exact period of time at which these lands were first cultivated has not been ascertained with certainty, but there is reason to believe that they were cleared for rice about the close of the seventeenth or beginning of the eighteenth century. The original settlers in this section of country were the Huguenots; and their descendants still continue to occupy the soil. The revocation of the edict of Nantes, which took place in 1685, drove vast numbers of these protestant christians from their fatherland to seek in a foreign wilderness that liberty of conscience which was refused them at home. About the year 1690 a large body of Huguenot emigrants landed in Carolina. Their first settlement was lower down on the Santee, but they shortly after moved up and occupied the country now embraced in the parishes of St. Stephen’s and St. John’s (Berkley.) The original grants from the proprietary government show that these lands about the head waters of Cooper river were among the first occupied. Rice was introduced into Carolina about the year 1693. According to Ramsay’s history, as early as 1724, 18,000 bushels were exported. Indigo was not planted until 1742; but it is known that during the cultivation of indigo these swamps were cleared, and had evidently been under previous cultivation. It is quite probable, therefore, that they were cleared and planted in rice shortly after the Huguenot settlement was made.

Indigo, after its introduction, became the favorite staple crop. It was found to be more sure and profitable, and rice was neglected. It continued to be the common staple of the country until about the year 1791, when the East India indigo supplanted Carolina indigo in the markets. In this state of things, which happened just before the introduction of cotton, rice was again resorted to. Cotton had been cultivated in Georgia, but its progress north was slow. The early planters met with failures and discouragements; but they finally succeeded, and rice, since then, has been entirely neglected as a market crop.

Should the value of cotton decline so much as to render a change necessary, these old rice-fields may be reclaimed with comparatively little labor. It is believed that an average crop of 40 bushels per acre might be raised from these lands. Where reserves can be made to supply the fields with water a greater amount of land might be cultivated; but without the assistance of water cultivation, three acres to the hand is as much as can be well attended. The facilities of sending it to market in the rough have been greatly increased by the opening of the Santee canal. The average value of rough rice, for several years past, has been 75 to 78 cents per bushel. At that price, and with a production of 120 bushels per hand, rice would be as profitable as cotton at 20 cents per pound. These remarks apply to the branches of Cooper river. The lands of the Santee swamp are of a much higher order of fertility. Rice was cultivated on those lands after indigo had become the favorite staple elsewhere, and until the increasing recurrence of freshets compelled the planters to desist from so hazardous a culture. When the system of embankment which is now in contemplation shall have been accomplished, these lands will again become, as they once have been, the garden spot of the State. Already the energy and perseverance of one individual† has secured to him a large body of these valuable lands; and should the experiment so successfully begun be effectually carried on through the whole extent of the river-swamp of our State, South Carolina will contain within her borders a tract of country equal in fertility to the Delta of the Nile. With genial

* Gen. Wm. Moultrie.

† Major Samuel Forcher, of St. Stephen’s.

climate, and the bright sun of heaven over her, she will draw again to her bosom her alienated sons, and the gracious promise of old will come to gladden her fields with joy, "that while the earth remaineth, seed-time and harvest, and cold and heat, and summer and winter, and day and night, shall not cease."

AGRICULTURAL EDUCATION.

COLUMBUS, *March 20, 1855.*

DEAR SIR: Your esteemed favor of the 17th instant has been received. You will please accept my thanks for the concern which you are manifesting in the promotion of the great agricultural interests of the country. I think your plan is not only beautiful in theory, but well suited to impart valuable information, and perfectly practicable in its adaptation to the wants of the country. It is difficult, however, to anticipate what public sentiment will approve, and it occurs to me that it might be well to elicit expressions of opinion by a little agitation of the subject before the public, and I therefore suggest the propriety of publishing your letter, and tender to you the privilege of the columns of *The Soil* for such additional thoughts as you may desire to offer, in support of the plan. This will probably draw out others, and in this way the whole subject may be discussed, and the public mind be prepared for its adoption. I have not thought sufficiently on the subject to very confidently offer an opinion, but should be glad to have the question examined, and see some move made for the training of the young men of our country, to meet the emergency which our wretched systems of culture has forced upon us. You will please excuse me for not saying more on this subject now as it is one which concerns the whole country, and I hope you will consent to let them have the benefit of what either of us may have to say.

I am, very respectfully, your obedient servant,

JAMES M. CHAMBERS.

REV. C. P. MARTIN.

SYNODICAL COLLEGE, GRIFFIN, GEORGIA, *March, 1855.*

DEAR SIR: The interest you have manifested in efforts to promote agricultural improvement, and the opportunity your position as editor of *The Soil of the South* has given you to judge correctly concerning the *practicability* of the plans which may be entered upon for that purpose, induce me to address you and ask your opinion respecting the probable success of an enterprise which I have long desired to carry into operation, but concerning the *success* of which, though all agree as to its *desirableness* and *usefulness*, there has nevertheless obtained among my friends, to whom I have submitted my plan, a difference of opinion. The enterprise to which I refer is a *scientific and practical school connected with agriculture*. That you may be able to form a correct judgment concerning the enterprise, I will lay my *plan* before you a little more fully.

And first, the Course of Study.

- I. THE ENGLISH LANGUAGE.—In its orthography, its grammar, its rhetoric, its logic.
- II. THE EARTH.—Its geography, mineralogy, geology, and chemistry.
- III. NUMBER AND QUANTITY.—Embracing arithmetic, algebra, geometry, trigonometry, surveying, civil engineering.
- IV. NATURAL AND MORAL SCIENCE.—Embracing natural philosophy, meteorology, botany, chemistry, agricultural chemistry, ethics.
- V. Intellectual philosophy, political economy.

SECOND ITEM.—In connexion with the school I propose to have a *farm*, say of two hundred acres of land, to be cultivated in the most careful and scientific manner, and every operation of the farm to be made the subject of *daily observation and note*, by the students of the school. A regular *note book* is to be used by each student for the daily record of every operation, and an hour each day is to be appropriated for *farm inspection* as much as for recitation in the school-room. Observations will also be made and notes taken concerning the weather, the amount of rain, and other phenomena in meteorology.

I do not deem it necessary to enter into a minute explanation of the *application* or the *carrying out* of this plan in detail to you, for you will at once perceive that it embraces the *character of the soil*, the *kind of manures* used, and the *manner of preparing them*, as also the mode and time of applying them, the manner of ploughing; the kind of plough; the time of ploughing; the time and manner of planting; the culture; the result.

The carrying out of the plan just sketched will be a *scientific school*, for all the knowledge acquired would be *classified science*, being classified knowledge; it would also be a *practical school*, for all the knowledge acquired would be at once applied. Agricultural chemistry in some form or other would be a subject of daily study. With the smaller students, such a text book as Johnston's "Agricultural Catechism" would be used, and with the larger or more advanced scholars, Gray's "Agricultural Chemistry," or some other of equal value, as Johnston's, Liebig's, Waring's, &c.

I do not propose to make it a manual labor school; the labor on the farm is to be performed by farm hands as on any other plantation. The farm and all operations are, so far as the school is concerned, merely for *observation, illumination, and experiment*. It is to be the *great laboratory* of the school—it is to be its *cabinet and herbarium*. This being the case, you at once perceive that *Botany, Mineralogy, Geology, and Agricultural Chemistry* will be taught *practically*.

I do not now propose in this communication any argument to show the advantages, distinctive and characteristic, which must result from an education conducted on this plan. They lie so apparent, it seems to me, upon the very surface of the system, that I only wonder that all the schools in the land have not been modeled upon this *practical idea*. I will, however, simply add the remark that the *distinctive characteristics* of the plan of education I propose, are *observation, experiment, and practical application*. I wish to see a system of education established which shall develop more fully the powers of observation of correct reasoning, of just analysis and of drawing correct conclusions from the fact observed and the analysis made. And would not the system I am laying before you accomplish these ends? Is it not based upon the true Baconian philosophy, of induction of principles and practice from observed facts? Who can estimate the amount of useful knowledge a youth would acquire in three or four years, say from fourteen to eighteen years of age, under such a system of *observation and experiment* as I have mentioned? Would he not know arithmetic? Could he not survey a field? Would he not be familiar with *botany, mineralogy, geology, chemistry*? Would he not be familiar with the composition of soils and manures, of plants and grains?

We have had exhibited in Georgia, within the past year, a noble illustration of the high estimation in which agricultural knowledge is held by one of our most distinguished citizens. I allude, of course, to the liberal endowment of the Terrel Professorship in the State University for Agricultural Chemistry, by Dr. Terrel, of Sparta; I can speak of this donation, so far as the *animus* of the endowment is concerned, in none other than terms of the highest commendation, but I cannot think, however, that the mode of applying it is altogether the most effective and best calculated to accomplish the end desired. Had the same amount of money been expended in founding a school such as I have sketched, it does strike me that it would have accomplished a vast deal more good. It is true, that a learned and competent professor has been found in Dr. Lee to fill the chair, yet we know that what we learn *practically* in all the sciences—botany, mineralogy, geology, chemistry—which sciences are the *frame work and soul* of agriculture, is of infinitely more value to us than the demonstrations of the lecture room, however learned and beautiful. These, we know, are soon forgotten. What we most want to advance the noble science of agriculture is the *blending together* of the demonstrations of the lecture-room and the demonstrations of practice. Let the student see the operation as well as learn the fact.

Much good sense is found in a short article in the January number of *The Soil*, taken from the *Working Farmer*, called "Agricultural Education." Its recommendations tally with my plan. Please let me hear from you at your earliest convenience. If I have failed to make myself fully understood, I shall write you again. I am just out of bed from an attack of neuralgia, and I am scarcely able to write at all. Very truly, your obedient servant,

CARLISLE P. B. MARTIN.

Col. JAMES M. CHAMBERS.

SOMETHING FOR COTTON PLANTERS.

We have had on our table for some weeks, but we have been prevented from using it sooner by the pressure of other matter, a description in the Nashville Farmer's Banner of a new invention, called the "Cotton Leaf Cleaner and Boll Picker." The inventor has obtained a patent for it. He is a cotton planter of Alabama, and is said to be a gentleman of fine education and general information. He is making alterations in the machine, and will soon have his models ready for examination and trial. The object aimed at by him is to bring into use an instrument for picking cotton, and to improve its value by removing the leaf and dirt, and thus send it clean to the gin.

Speaking of this invention, a correspondent of the Banner says :

"It comes, a welcome ally, to aid in the great army of cotton-pickers, whose labors are tedious and severe. It brings iron fingers and mule muscles to do the work now done by human fingers, and thus accomplishes in three days what now requires six. It can be worked by any power that will work a gin. A portable horse-power set up in the field will be found convenient, and can be extensively used in October and November, when the seasons are dry. The cotton bolls are to be gathered with as little care as you would corn, and taken to the machine, either in the field or under shelter, as the case may be. Then the machine and the mules take out the bolls, leaf, dirt, and everything, and the cotton comes through the gin as middling to good middling in quality.

"Such a machine, to the cotton growers of the United States, is worth millions, provided it can be made to do what is intended by the inventor. The object to be accomplished is not without difficulties, and if the first machine, which will soon be presented to the public for inspection, makes an approach to the end aimed at, we may feel confident that the defects will soon be remedied by the genius of American talent, and that cotton will be picked by iron fingers instead of human, which will be equal to doubling the field force during the gathering of the crop.

"A planter who cultivates with fifty hands, may, by the aid of this machine, have what is equivalent to one hundred hands in gathering, and that without the expense of feeding them. He is thus enabled to save all that he can make, though he may cultivate the best bottom lands of Mississippi, Yazoo, Arkansas, or Old Caney. The hands can be kept out of the dew and their health preserved. More lands may be opened, and larger quantities cultivated, by driving two mules with sweeps and harrows thirty-six inches wide. That is, on bottom lands, where the rows are five or six feet apart.

"In the cleaning process, a small per centage may be lost, but you save the loss occasioned by standing in the field till February, exposed to winds and rains; and also much of the loss in the spinning-room, which is now ten per cent. from dirt, dust, leaf, &c.

"We shall look with much interest to the operations of this invention. Should it prove successful, it may, in truth, be characterized as a machine which will mark a more important epoch in the progress of the growth and manufacture of the great southern staple than any invention since the construction of the gin."
[Jackson Mississippian.]

GUN COTTON.—Guns, to be used with gun-cotton, are being made for the Austrian government. A letter from Vienna says: Thirty-two of the new guns (four batteries) to be used with gun-cotton are already finished, and it is believed that one hundred and twenty-eight more (sixteen batteries) are to be cast. The military authorities are extremely reserved just at present, but still it has transpired, that only twelve-pounders will in future be cast, "as they need not be heavier in metal than the old six-pounders if gun-cotton is used, and almost all the Russian field batteries are composed of twelve-pounders." The experiments with gun-cotton still continue, and one result is too remarkable not to be mentioned. A twelve-pound ball was fired from a gun charged with powder at some thick boards prepared for the purpose, and another ball of the same weight was fired from one of the new guns charged with gun-cotton. "Although the new gun was six hundred yards further from the target than the old one, the hole made by the shot from the former was well defined and clean, while the orifice made by the latter was jagged and splintery."

MARKS OF GOOD WORKING OXEN—FEEDING—MANAGEMENT, ETC.

The following I give as my opinion concerning the *marks of a good working ox, &c.* :

1. Long head, broad and oval between the eyes, the eye keen, full, and pleasant; such are marks denoting ability to receive instruction, and a readiness to obey.

2. Forward legs should be straight, toes straight forward, hoof broad, not peaked, distance short between ankle and knee.

These properties enable the ox to travel on paves and hard ground.

3. Full breast, straight on the back, round rib, projecting out as wide as the hip bones; these are indications of strength and good constitution.

In opposition to the above, we find the short-faced ox starts quick at the whip but soon forgets it.

If the ox toes out the strain comes on the inside claw, and when travelling on hard road he will be lame at the joint between the hoof and the hair. When the toes turn out the knees always bend in. The crooked-kneed ox is apt to become lame by holding heavy loads down hill.

Comparison: a straight stick, when set on one end, will bear up more weight than a crooked one.

The ox with very large horns near the head is apt to be lazy and will not stand the heat of the day. The black-eyed ox is apt to run away; oxen working in the same yoke should carry their heads on a level with each other.

Oxen working on a stone-drag, and on the foot of a plough, on the sled-spire, or cart-spire, twitching stones or timber, should carry their heads well up, as it will enable them to do this kind of work much easier. Oxen that work as leaders forward of other oxen should carry their heads low.

Oxen should be shod with a broad shoe. To travel on hard road the shoes on the forward foot should be set back at the heel nearly half an inch further than the hoof bears upon it. I have frequently known oxen to be lame in consequence of the shoe being too short at the heel.

The best way of feeding oxen for hard work, give each ox two quarts of meal, wet, and mixed with chopped hay, three times a day, and what hay his appetite naturally craves besides. This is the highest feed the working ox ought to have, and will enable the good ox to work ten or twelve hours every day. I think rye and Indian meal, mixed together, is better than clear Indian. Farmers who do not work their oxen *hard* have no need of giving them so much meal.

Steers should be broke quite young. Boys should never yoke them for the sake of a frolic. I think it a good plan for farmers, when they are going a short distance after a load, to take their steers with them and let the steers lead the team towards home. They will learn to draw towards the barn much better than from it. I have found it much easier to learn steers or oxen to *back* by giving them a gentle slap on the nose with the bare hand than by striking them with the butt end of the whip-stick, which is too often done.

When steers are first yoked they may be allowed to walk about in the barn-yard until they are satisfied the yoke will not hurt them. Working the young steer carefully causes his strength to gain with his growth without injuring the latter.

The best pair of working oxen I have ever known were handy before six months old, and are now owned at the State prison, in Charlestown, Massachusetts.

From experience, I do say, in my opinion, steers broke quite young are worth, for hard labor, twenty-five per cent. more than oxen that have come to their growth before they are yoked.

One word to the drivers of oxen. Feed regular, and do not forget the card, especially when they are shedding their coat. Have the yoke the right length that your oxen may walk up straight. Let the bows suit their necks—the yoke and bows to the leaders should set a little snugger than to the nib oxen; never use the whip only out of necessity—when you are about to strike the young steer ask yourself, Will he know what I strike him for? Let each ox have a name; and be sure that every ox in your team knows his name. Never speak a word to an ox without a meaning. Have a particular word to start your team by, that all may haul together; never hurry your oxen when you are riding behind them, lest you learn them to haul apart.

A. G. SHELDON.

BOOK NOTICES.

Cabinet Histories of the States.—We have received from Lippincott, Grambo & Co. the first series of this interesting work, consisting of twelve volumes, handsomely and uniformly bound. The works are thus referred to in the circular of that house, and will be again referred to by us:

First series of twelve volumes, now complete. Edited by William H. Carpenter and T. S. Arthur; cloth.

The publishers of this important series are happy to announce the completion of the first portion, embracing twelve volumes. These are:

1. The History of Virginia.
2. " New York.
3. " Massachusetts.
4. " Georgia.
5. " Connecticut.
6. " Pennsylvania.
7. " New Jersey.
8. " Kentucky.
9. " Ohio.
10. " Tennessee.
11. " Vermont.
12. " Illinois.

History of the Second War between the United States of America and Great Britain, declared by Act of Congress the 18th June, 1812, and concluded by Peace the 15th of February, 1815. By Charles J. Ingersoll. 2 volumes. Philadelphia; Lippincott, Grambo & Co. Mr Ingersoll's work has been for some time known to the country, and is now, or ought to be, in most of our private libraries. It is the only history of what may be called our second war of independence, and though it falls short of what was expected in such a work, it is still entitled to high consideration. The writer has collected and combined a vast mass of information in its pages.

History, Condition, and Prospects of the Indian Tribes of the United States: collected and prepared under the direction of the Bureau of Indian Affairs, per act of Congress. By Henry R. Schoolcraft, LL.D. Illustrated by S. Eastman, U. S. A. Philadelphia; Lippincott, Grambo & Co.

Four volumes of this great national work have appeared and may be obtained complete from the publishers. Each volume is a superb quarto of a thousand or more pages. There are over two hundred beautiful illustrations on steel, many of which are colored. The paper and printing have seldom been equalled in any American publica-

tion. We suppose that every gentleman forming a library will not fail to procure a set of the work.

Agriculture and Geology of Mississippi, embracing a Sketch of the Social and Natural History of the State. By B. L. C. Wailes, geologist of Mississippi. Philadelphia; Lippincott, Grambo & Co., 1854. This work was published under the direction of the legislature of Mississippi, and will, no doubt, be in the hands of most of its citizens. It is creditable to the author and to the State. In the present number of the Review we have extracted from its pages, and we will prepare, if possible, an elaborate review for our next issue.

We are indebted to Messrs. Lippincott, Grambo & Co. for a copy of their catalogue, embracing splendid library editions of the standard poets, illustrated, miscellaneous works, juvenile books, law and medical books, school books, histories, dictionaries, classical works, French, German, and scientific works, Bibles and prayer books, superb editions. We shall refer to some of these again.

History of Napoleon Bonaparte; by John S. C. Abbott; with maps and illustrations; in 2 vols. New York: Harper & Bros., 1855.

This work, which originally appeared in parts in Harpers' Magazine, and was read with such greedy interest in every section of the Union, has now been republished complete in two large royal octavo volumes, with many additions and copious notes. It will no doubt be sought for with as much interest as were the original papers. Compared with any other biography of Napoleon, the merits of this are manifest, and none, we believe, have done such ample justice to the great warrior, statesman and philosopher. The illustrations, both wood and steel, are of the finest character.

Literary and Historical Miscellanies; by George Bancroft. New York: Harper & Bros., 1855. Mr. Bancroft has placed himself in the first rank of American historians, and is as familiarly known among the scholars of Europe as of this country. His eloquent style, glowing imagery, luxuriant fancy, go hand in hand with severe research and profound analysis. A volume of his miscellaneous writing will be an admirable companion for the history. Among the subjects embraced are: The Doc-

trine of Temperaments, Ennui, The Ruling Passion in Death, Studies in German Literature, Studies in History, Occasional Addresses.

Practical American Cook Book, or Practical and Scientific Cookery; by a Housekeeper. New York: D. Appleton & Co., 1855. Though not so elaborate a volume as that of Mrs. Hale, noticed by us last year, this will be a useful handbook for the family. There is room enough for many such treatises. Cookery is inexhaustible. Heaven sends us provisions, but cooks come from less blessed regions.

The Winkles, or the Merry Monomaniacs; an American Picture, with Portraits of the Natives; by the author of "Wild Western Scenes," &c. D. Appleton & Co.: New York, 1855; Washington, R. Farnham. The leading characters of the book are Edith Winkle, the Merry Widow; Walter, her Rattling Son; a "Know-Nothing;" Miss Wilsome Winkle, an old maid, sister-in-law of the widow, and a monomaniac; Napoleon Winkle, monomaniac on Great Napoleon's battles; Ralph Roland, instrument of the Jesuits, &c., &c., &c.

The Summer Land; a Southern Story; by a Child of the Sun. New York: D. Appleton & Co., 1855. The Overseer and his Wife; The Shadows of Life; Representative Cities; King Cotton; Representative Men, &c., &c. This is an amusing and interesting volume, and we shall take pleasure in referring to it again.

Journey through the Chinese Empire; by M. Huc, author of "Recollections of a Journey through Tartary and Tibet," in 2 volumes. New York: Harper & Bros., 1855. China, which has always been so interesting a theme, has become more so since the great events which have been transpiring within its walls. The American, since our treaties with Japan and the opening of our Pacific coast, feels some of the interest of vicinage, and looks even in that direction for the extension of his commerce and the development of his institutions. The work contains a fine map and gives a full view of the missionary operations in China, and is otherwise most interesting and valuable.

History of Turkey; by A. De Lamartine, author of the "Girondists," "Travels in the Holy Land," &c. Translated from the French; 3 vols.; New York: D. Appleton & Co. Every one is aware of M. Lamartine's familiarity with the East. He tells us in his

preface, "The more a history is new in manners, magnificent in events, distant in situations, marvellous in characters, the more it needs to justify the full exactness of its recitals. The testimonies and the documents upon the basis of which we have written are no less numerous than incontestable, independently of those which our divers sojourns in Turkey, our travels in the provinces, our examinations of the celebrated places, the cities, the monuments, the battle-fields, and our personal relations with the most eminent men of the empire, have exceptionally supplied us." As the other volumes appear we shall notice them fully.

The New Pastoral. By Thomas Buchannan Read. Philadelphia: Parry & McMillan, 1855. This is a poem of 250 pages, with a fine steel engraving. The writer has already established a place among our poets.

My Brother's Keeper. By A. B. Warner, author of Dollars and Cents. New York: D. Appleton & Co., 1855. Washington: Taylor & Maury. Contents: Love in the Market; Yankees Abroad; The Secret Society of Medicine; A Day at the Quakerage; A Night View; The Last Day of December; The 1st of January, &c., &c., &c.

Chemistry of Common Life. By Jas. F. Johnson, M. A., F. R. S., F. G. S., &c. &c., &c., author of "Lectures on Agricultural Chemistry and Geology." Illustrated with numerous wood engravings. New York: D. Appleton & Co. We have extracted from this work in our last number, and intend a full analysis of it. The subjects are: The Narcotics we indulge in—Tobacco; The Hop and its Substitutes; The Poppy and the Lettuce; Indian Hemp; The Betel-nut and the Pepperworts; Coco; The Thorn Apples, the Siberian Fungus, and the Minor Narcotics; The Poisons we select; The Odors we enjoy.

The Hiringling and the Slave. Second edition. Charleston: John Russell, 1855. We extracted one or two passages of this poem in our late number. It is understood to be from the pen of Hon. William J. Grayson, of South Carolina.

Constance Herbert, a novel; by Geraldine E. Jewsbury, author of "Marian Withers," "Zoe," "The Adopted Child," &c., &c. New York: Harper & Bros., 1855. Library of select novels.

The Westminster Review. April number.

Blackwood's Magazine. May number.

London Quarterly Review. April number.

We are indebted to Leonard, Scott & Co. for copies of these able magazines. They are the well known republications of this house, and they are furnished at so low a price as to give them a wide circulation in our country.

History for Boys, or Annals of the Nations of Modern Europe. By John G. Edgar. New York: Harper & Bros. The history of each of the states of Europe are treated of in an interesting manner for the instruction of boys.

Gillespie's Land Surveying, comprising the theory developed from five elementary principles and the practice with the chain alone, the compass, the transit, the theodolite, the plane table.

By W. M. Gillespie, A. M., civil engineer. New York: Harper & Bros. We give the title in full, which sufficiently indicates the nature and character of the work, which emanates from an able source, and will, no doubt, become a text book.

A few Months in America, containing remarks on some of its industrial and commercial interests. By James Robertson. London: Longman & Co. We made the acquaintance of Mr. Robertson when in this country. He is a good observer and has noted with much fairness what came under his notice. We have marked many passages for extract and comment, and will refer to this work again.

STATISTICS OF MALES AND FEMALES.

GEORGETOWN, Ky., Feb. 27.

DEAR SIR: As you are in the line of statistics, I send you, herewith, a copy of the second Registration Report of Kentucky, for 1853. I am the more especially induced to do this, because of a note found at page 101 of your Compendium of the United States Census. I allude to the suggestion of Professor Tucker, whether the excess of male births does not depend upon a greater vitality of that sex enabling them to withstand the dangers of birth.

I cannot see any probability of truth in an answer in the affirmative. On the contrary, I am inclined to believe there is much truth in Dr. Emmons' (the writer in the American Journal of Medical Sciences, alluded to in the beginning of the note) theory. Considerable allowance must be made, however, in receiving the Doctor's impressions as to the physical perfections, &c., of Kentuckians; or, at any rate, of the fact which he seems to think grows out of it, viz: the great excess of male birth. In our reports all still-born children are included in the general table of births. Not so in those of Massachusetts. The male excess among the still-born is much greater than among the live-born, which, of course, makes the difference in Kentucky, as compared with Massachusetts, appear much greater than it is in reality.

As it is altogether convenient, I will give you a statement as to sex among the still-born, for two years in Kentucky and three in Massachusetts:

	Massachusetts.			Kentucky.	
	M.	F.		M.	F.
1848—9 months..	23	15	1852...	451	404
1849	62	49	1853...	360	263
1851	134	83		841	567
1852	264	310		453	357
				482	357
				1323	924

This exhibits a rather startling aspect as to the male excess of mortality. But, if I mistake not, the notions of our profession, whether based on statistics or not, are, that even before birth the excess of mortality among the males begins.

The first Rhode Island report does not coincide with those of Massachusetts and Kentucky; but the observations are too few to be of much value.

It may be fair to remark, that I have no great reliance upon the correctness of the Kentucky returns, so far as the fact of being still-born is concerned; because, in a number of cases, although a child was returned as born dead, it yet had a name; and it is probable that a number were born alive, but died before the enumeration. But these, probably, were divided between the sexes.

W. L. SUTTON.

J. B. D. DEBOW, esq.

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THE WARS AND FORCES OF THE UNITED STATES.—The following statement of the effective military force engaged in the different wars has been prepared with great care at the office of the Adjutant General, and will be of interest to the general reader:

Effective military force engaged in different wars.

Wars and Frontier Disturbances.	Com'd officers.	Men.	Aggregate.
Late war with Great Britain, 1812	31,210	440,412	471,622
Seminole war, 1817 and 1818.	413	5,498	5,911
Black Hawk war, 1832	491	4,540	5,031
Florida war, 1836 to 1842.....	1,621	28,332	29,953
Creek disturbances, 1836-'37..	794	11,689	12,483
Southwest'n frontier disturbances, 1836	161	2,642	2,803
Cherokee country, 1836 and 1837	236	3,690	3,926
New York frontier disturbances, 1838-'39..	115	1,013	1,128

Aggregate.....	35,041	497,816	532,857
Mexican war, 1846 to 1848..	3,131	70,129	73,266
Grand aggregate	38,172	567,945	606,117

War of 1812, commenced June 18, 1812, ended February 17, 1815.

War, Seminole, commenced November 20, 1817, ended October 31, 1818.

War, Black Hawk, commenced April 26, 1832, ended September 21, 1832.

War, Florida, commenced December 28, 1835, ended August 14, 1842.

Creek disturbances, commenced about May 5, 1836, ended September 30, 1837.

Southwestern (Arkansas) frontier disturbances, 1836; no actual war, no fighting; not entitled.

New York (Canada) frontier disturbances, 1838 and 1839; no war, no fighting; not entitled.

Mexican war, commenced April 24, 1846, ended July 4, 1848.

Every regiment of the army, except 1st Dragoons, Mounted Rifles, and 5th Infantry, were engaged in the Florida war.

THE LONGEVITY OF SLAVES.—The compend of the census devotes a section to the subject of the relative mortality of the white and black races in the

United States. In referring to this matter the *Charleston Medical Review* remarks:

"On an examination of this table one fact stands prominently forth; it is that of the greater longevity, both general and extreme, of the black than the white in the slaveholding States. This is a fact pregnant with significance, proving conclusively, as it does, that the almost complete freedom from care, the lightness of his labor, and the physical comforts generally enjoyed by the

slaves, combine to increase the duration of his life, not only beyond that of the *laboring white class*, but even beyond the average of the white class of all conditions.

"But the difference between the two races in point of longevity would be still greater in favor of the black than is presented in the table, if we deduct a certain proportion of early deaths from the latter, occurring among the mulattoes, who exist in large numbers in the cities of the slave States."

MILLIONAIRES OF NEW YORK.

"William B. Astor is our richest man; he inherited his wealth. Stephen Whitney, five millions; owes his fortune to speculations in cotton and rise in real estate. W. H. Aspinwall, four millions; came of a rich family, and gained vast increase of wealth in the shipping business. James Lenox, three millions, which he inherited. The late Peter Harmony, two millions; came to this city as a cabin boy, and grew rich by commerce. The Lorillards, two millions; came from France poor, and made their huge fortune in the tobacco and snuff business. The late Anson G. Phelps, two millions; learned the trade of a tinner, and made a fortune in iron and copper. Alexander D. Stewart, two millions, now of the dry goods palace; began business in a little fancy store. Of those who are put down for a million and a half, George Law began

life as a farm laborer; Cornelius Vanderbilt as a boatman; John Lafarge as steward to Joseph Bonaparte. Of the millionaires, James Cheesterman began life as a journeyman tailor, Peter Cooper as a glue-maker. George Bancroft, Henry James, Professor Anthon, Thos. McElrath, and Dr. Francis are each stated to possess a hundred thousand dollars. Edwin Forrest is rated at a quarter of a million, so is Sidney E. Morse, of the *New York Observer*. William Niblo, it appears, has four hundred thousand dollars, and Dr. Mott two hundred thousand. Barnum is put down at eight hundred thousand, Bennett at one hundred and fifty thousand. But perhaps the most remarkable statement of all is, that Mrs. Okili, of New York, has made a quarter of a million dollars by keeping school!"


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DE BOW'S REVIEW.

AUGUST, 1855.

LITERARY AND MISCELLANEOUS JOURNAL.

THE COAL PRODUCT OF THE UNITED STATES.

In the February number of the Review, some valuable information upon this subject was presented to our readers. We are now glad of an opportunity to complete the paper:

In the year 1815, when the duty on foreign coal was \$3 60, the price in New York was \$23 the chaldron of 36 bushels.

From 1816 to 1823, the duty was \$1 80, and the average price was \$11.

From 1824 to 1834, the duty was \$2 16, and the average price was \$14.

In 1842 the duty was \$1 75 per ton, and the market price was \$7 16; and in 1844, with a duty of \$1, the price was \$5 56. In the year 1846, the duty was altered to an ad valorem one of thirty per cent., or about 45 cents per ton, and the market price since has ranged from \$6 50 to \$7 50.

Pennsylvania is rich in its coal product. This article is one of the great sources of wealth to that State, and its importance may be seen through the various railroads and canals of that State eastwardly. We refer only to the anthracite region, whose mines seem to be inexhaustible, and we leave out of view the immense production in western Pennsylvania. The latter portion of the State owes its growth mainly to its coal-beds, in conjunction with its iron and glass manufactures.

The maximum capabilities of the transportation companies may be set down at 7,300,000 tons per year, with their present forces, namely:

	Tons.
Lehigh (Canal) Navigation Company.....	1,300,000
Schuylkill.....do.....do.....	1,000,000
Reading Railroad.....	4,000,000
Delaware and Hudson Canal.....	1,300,000
Total.....	<u>7,600,000</u>

If we may judge by the increase of the last two or three years, the quantity of coal required by the above conveyances will be 7,500,000 tons for the coming year, and between eight and nine millions for the year 1856. We have received from London the special report of Professor Wilson on the New York Industrial Exhibition, in which document we find a variety of useful information in reference to the manufactures, minerals, mining, and metallurgy, of the United States. His remarks on the iron, lead, copper, and zinc products and manufactures will be a valuable addition to the information already in possession, and will be acceptable as well to the legislator as to the manufacturer and merchant.

Virginia takes the lead among the eastern (or Atlantic) States, as the owner of coal-fields, and is, in fact, one of the prominent States of the whole Union as the possessor of this valuable mineral.

Area of the several States where coal is found, and the coal areas of each, and the proportion of coal.

States.	Area.	Coal areas.	Proportion of coal.
	<i>Sq. Miles.</i>	<i>Sq. Miles.</i>	
1. Alabama	50,875	3,400	1-14
2. Georgia	58,200	150	1-386
3. Tennessee	44,720	4,300	1-10
4. Kentucky	39,015	13,500	1-3
5. Virginia	64,000	21,195	1-3
6. Maryland	10,829	550	1-20
7. Ohio	38,850	11,900	1-3
8. Indiana	34,800	7,700	1-5
9. Illinois	59,130	44,000	3-4
10. Pennsylvania	43,960	15,437	1-3
11. Michigan	60,520	5,000	1-20
12. Missouri	60,384	6,000	1-10
Total	565,293	133,132	Nearly 1-4

North Carolina is reputed to hold about as much coal land as Georgia.

From this valuable reference-table it will be seen that Illinois takes the lead, having within her own borders *one-third* of the entire coal region of the United States. Next in importance is Pennsylvania, producing both anthracite and bituminous coals. Of these immense fields Professor Wilson says:

“These comprise the three anthracite coal-fields of Eastern Pennsylvania known as the Southern, or Schuylkill, the Middle, or Shamokin, and the Northern, or Wyoming, and

the Frostburg or Cumberland coal-field, (semi-bituminous,) in the State of Maryland. Besides these beds, a small outlying bed exists in Pennsylvania of semi-bituminous coals, known as the Broadtop, which, however, owing to its insulated position, being without any means of access, is only available for local purposes; and some deposits of considerable area in Virginia, whose importance is being daily recognized, and whose produce is daily finding its way into the markets. The demand, at present, however, is confined chiefly to gas-making purposes.

“Of the three anthracite beds of Pennsylvania, the Southern is, both by situation and magnitude, the most important, and furnishes a large proportion of the entire supply. It presents great facilities of access, which have been made advantageous use of by two canal companies, the Lehigh and the Schuylkill, and by the Reading railroad, which penetrate far into the interior, and form the great outlets for its produce. Other railways are now in progress, which will not only afford additional facilities of transfer to the Atlantic cities, but also open a communication to the latter, and through them to the western markets.”

The third in importance is Ohio, having nearly one-third of its area in coal. The returns as to production are not copious, but Sir Charles Lyell, who made critical inquiries on the subject, reported the following as the yield for 1851-'52:

	Bushels.	Tons.
Western Pennsylvania.....	35,000,000	1,170,000
Virginia.....	15,000,000	500,000
Eastern Ohio.....	16,000,000	535,000
Total.....	66,000,000	2,205,000

At the exhibition were produced samples of coals from Valley Falls, Rhode Island, but the product is of inferior quality.

Of the Virginia coal, twelve miles west of Richmond, and extending fifty miles, the seams are 800 feet in thickness—being the deepest mines known in America. In Belgium some of the mines are known to be from 1,140 to 1,476 feet in depth; in England, 1,000 to 1,794 feet—with an average in Lancashire of 750 feet.

To Mr. Taylor's work (published by J. W. Moore, Philadelphia) we are indebted for the following summary:

Countries.	Area.	Coal area.	Proportion.
	<i>Sq. Miles.</i>	<i>Sq. Miles.</i>	
Great Britain, Ireland, Scotland, and Wales....	120,290	11,859	1-10
Spain, (Asturias region,).....	177,781	3,408	1-52
France (area of fixed concessions) in 1845.....	203,736	1,719	1-118
Belgium, conceded lands.....	11,372	518	1-22
Pennsylvania, United States.....	43,960	15,437	1-3
British Provinces of New Brunswick, Nova Scotia, Cape Breton, and Newfoundland.....	81,113	18,000	1-4½
Prussian dominions.....	107,937	.....	.....
Austrian provinces containing coal, or lignite....	150,000	.....	.....
The United States of America.....	2,280,000	.....	1-17
The twelve principal coal-producing States.....	565,283	133,132	1-4
		184,073	

We assume these as, in round numbers, correct; and here we perceive at a glance the vast resources of the United States in their coal-producing regions, when compared with Europe. It must be recollected, too, that several of our States have not had geological surveys; and it would not be surprising if other States than those enumerated were found, hereafter, to possess coal in abundant quantities.

The whole coal region of Europe is, by Mr. Taylor, shown to be only 50,941 square miles, being *somewhat less than that of the western States of Illinois and Indiana*, while England has only 8,139 miles, and Ireland 3,720 miles, the aggregate being somewhat less than that of the State of Ohio. But Great Britain produces annually upwards of 31,000,000 tons of coal; while the yield of Pennsylvania is, perhaps, ten millions of tons.

The consumption of coal in Europe and the United States was estimated as follows in 1845, showing also the square miles of coal formation, the relative proportions, and the value in dollars:

	Square miles.	Production in 1845, tons.	Proportion.	Value.
Great Britain.....	11,859	31,500,000	642	\$45,738,000
Belgium.....	518	4,960,000	101	7,689,000
United States.....	133,132	4,400,000	89	6,650,000
France.....	1,719	4,141,000	84	7,663,000
Prussian States.....	Undefined.	3,500,000	70	4,122,000
Austrian States.....	"	659,000	14	800,000
Total.....	.....	49,160,000	1,000	72,662,000

Increased importation of coal into the port of London by sea and land, from 1,667,301 tons in 1822, to 3,461,910 tons

in 1845—108 per cent. in 23 years; from 300,000 tons in 1699 to 3,461,199 in 1845—1057 per cent. in 146 years; from 2,079,275 tons in 1830, to 3,461,199 tons in 1845—66 per cent. in 15 years.

1846.....	2,953,755 tons.
1847.....	3,280,420 "
1848.....	3,418,340 "
1849.....	3,339,146 "
1850.....	3,553,304 "

Table showing the quantity of Cumberland coal sent to tide-water from 1842 to 1853:

Year.	Jennings' Valley.	Braddock's Valley.	Total.
1842.....	757	951	1,708
1843.....	3,661	6,421	10,082
1844.....	5,156	9,734	21,890
1845.....	13,798	10,915	24,653
1846.....	11,440	18,555	29,795
1847.....	20,615	32,325	52,940
1848.....	36,571	43,000	79,571
1849.....	63,676	78,773	142,449
1850.....	76,950	119,898	196,848
1851.....	122,331	135,348	257,679
1852.....	174,891	159,287	334,178
1853.....	234,441	225,813	533,980
Tons	764,227	841,020	1,678,773

From the Piedmont region 73,725 tons were sent in 1853, and total up to August 1854, from the Cumberland region 353,154 tons.

We now only propose in this place to introduce an estimate of the condition, as to production, of the iron manufactory or smelting in the year 1845, the latest year in which we could obtain a series of contemporary returns, (*see Taylor's Coal Statistics.*)

The respective proportions are as follows:

1. Great Britain	2,200,000
2. United States	502,000
3. France.....	448,000
4. Russia	400,000
5. Zollverien or Prussian States	300,000
6. Austria	190,000
7. Belgium	150,000
8. Sweden.....	145,000
9. Spain (1841)	26,000
10. All other European countries.....	50,000
Total.....	<u>4,411,000</u>

MAKE OF IRON IN ENGLAND.

Year.	Furnaces in blast.	Iron produced in Tons.
1830.....	360	678,417
1840.....	402	1,396,400
1843.....	...	1,215,350
1845.....	...	1,512,500
1848.....	...	1,998,568
1850.....	459	2,380,000
1852.....	655	2,701,000
1854.....	...	2,250,000
Persons employed in mining.....	120,000	

During the ten months ending November 5, 1853, Great Britain exported \$75,000,000 worth of iron, and by far the largest portion was taken by the United States. Of pig-iron, the United States received 57,000 tons, and Holland, which comes next upon the list, took 13,000. Of bar, bolt, and rod-iron, the United States took 263,530 tons, or nearly six times as much as Canada, which received the next largest amount.

VALUE OF IRON IMPORTED INTO THE UNITED STATES.

Year.	Value.	Duty	Year.	Value.	Duty.
1844.....	\$2,395,760	\$1,607,113	1850.....	\$10,864,680	\$3,269,404
1845.....	4,075,142	2,415,003	1851.....	10,781,312	3,234,094
1846.....	3,660,581	1,629,581	1852.....	18,843,569	5,632,484
1848.....	7,060,470	2,118,141	1853.....	27,015,364	8,104,609
1849.....	9,262,567	2,778,770			

Imports of iron from Great Britain into the United States, (*fractions omitted:*)

Year.	Tons.	Year.	Tons.	Year.	Tons.
1820....	8,000	1830...	21,000	1840...	72,000
1821....	9,000	1831...	41,000	1841...	112,000
1822....	15,000	1832...	45,000	1842...	107,000
1823....	13,000	1833...	62,000	1843...	28,000
1824....	11,000	1834...	47,000	1844...	102,700
1825....	13,000	1835...	63,000	1845...	68,000
1826....	12,000	1836...	91,000	1846...	.....
1827....	21,000	1837...	54,000	1847...	.....
1828....	22,000	1838...	78,000	1848...	.....
1829....	17,009	1839...	85,000	1849...	315,000

The following is a list of prices of coal during the past twelve years at Philadelphia, wholesale; and at New York and Boston by retail:

Year.	Philadelphia.	New York.	Boston.
	<i>Ton of 2240 pounds.</i>	<i>Ton of 2000 pounds.</i>	<i>Ton of 2000 pounds.</i>
1839.....	\$5 50	\$8 00	\$9 00 to \$10 00
1840.....	5 50	8 00	9 00 to 11 00
1841.....	5 00	7 75	8 00 to 9 00
1842.....	4 25	6 50	6 00 to 6 50
1843.....	3 50	5 75	6 00 to 6 50
1844.....	3 37	5 50	6 00 to 6 50
1845.....	3 50	5 75	6 00 to 7 00
1846.....	4 00	6 00	6 50 to 7 00
1847.....	3 85 to \$4 00	5 50 to \$6 00	6 50 to 7 00
1852.....	3 75	6 00 to 7 00	.....
1853.....	4 25 and 4 50	.....	7 00 to 8 00
1854.....	4 50 and 4 75	7 00 to 8 00	8 50 to 9 00

Table showing the imports of Foreign Coal into the United States annually, from 1821 to July 1, 1853.

Year.	Tons.	Year.	Tons.	Year.	Tons.
1821....	22,122	1832...	72,978	1843....	41,163
1822....	34,523	1833...	92,432	1844....	87,073
1823....	30,433	1834...	71,626	1845....	85,771
1824....	7,228	1835....	49,969	1846*	156,855
1825....	25,645	1836....	108,432	1847†...	148,021
1826....	35,655	1837....	153,450	1848....	196,251
1827....	40,257	1838....	129,083	1849....	198,213
1828....	32,302	1839....	181,551	1850....	180,439
1829....	45,393	1840....	162,867	1851....	478,095†
1830....	58,136	1841....	155,394	1852....	405,652†
1831....	36,508	1842....	141,526	1853....	231,508

According to the recent reports of Sir Charles Lyell and Professor Wilson, the coal deposits of the United States present features of great importance and interest to the geologist; their immense area, varying surface, etc., supplying a constant field for the researches of the man of science, and for the development of those economic applications which have of late years given such value to the possession of the mineral fuel. The history of the coal industry of the United States belongs to the present generation; having had no existence anterior to the year 1820. In that year the Lehigh Coal and Navigation Company sent the first fruits of its operations to Philadelphia, in the shape of sundry loads of coal,

* From December 1, 1846, to June 30, 1847.

† For the year ending June 30, 1846.

‡ Value.

amounting in the aggregate to about 365 tons. Its progress from that date will be fully seen in the annexed table showing the aggregate receipts for each year to the end of 1853. The first receipts by the Reading Railroad were in 1841. The present arrangements of this company are such that it is enabled to bring about forty-two thousand tons per week, or six thousand tons per day. The table on the next page will be found valuable and curious for future reference, as it shows the various periods at which the Lackawanna, Wilkesbarre, Shamokin, Lykens Valley, and Dauphin county coal regions were severally opened.

SLAVE MARRIAGES.

The people of North Carolina are agitating a project, and which is soon to be brought before the legislature of that State, that will create a sensation. It is, first, to render legal the institution of marriage among slaves; second, to preserve sacred the relations between the parents and their young children; and third, to repeal the laws prohibiting the education of slaves. Says the Port Gibson (Mississippi) Reveille: If this modification in the law is made in North Carolina, as we are informed it probably will be, other States will no doubt take the matter into consideration. The main features of the movement have been adopted in practice, or at least approved in theory, by nearly all our planters, so far as circumstances would allow; and we cannot but think the modification is well worth the serious consideration of every southern man. Should the southern people think proper, after due investigation, to adopt the regulation in each of the slave States, slavery will then be regarded in an entirely new light, and the enemies of the institution will be robbed of their most fruitful and plausible excuses for agitation and complaint. There may be, however, evils to contend with and objections to be answered in the adoption of such a modification.

THE WIFE'S RIGHTS.

The Supreme Court at Harrisburg, Pennsylvania, has decided that no agreement made before marriage giving a wife the control and disposition of her property is valid, and that after her death the property belongs to her husband, no matter what stipulation she may have made, and he consented to, in regard to it before marriage.

ANTHRACITE COAL TRADE OF THE UNITED STATES.
 The following Table exhibits the quantity of Anthracite Coal sent to market from the different regions in Pennsylvania, from the commencement of the trade in 1820 to 1853, inclusive; together with the annual increase, etc., and the importations of foreign Bituminous Coal.

Years.	SCHUYLKILL.				LEHIGH.				OTHER REGIONS.				Aggregate.	Annual increase.	Consumption.	Sold on line of for'n coal.	Import coal.
	Canal.	Railroad.	Total.	Pine Grove.	Little Schuylkill.	Total.	Lackawanna.	Wilkes-barre.	Shamo-kn.	Lykens Valley.	Dauphin county.						
1820			865											865			92,193
1821			1,078											1,078			84,598
1822	1,430		9,240											8,790			30,438
1823	1,128		5,938											7,101			7,988
1824	1,567		9,541											11,108			23,645
1825	6,500		28,393											28,892			35,665
1826	16,707		31,390											48,047			40,257
1827	31,860		38,074											63,484			38,308
1828	47,984		30,232											77,516			8,154
1829	79,973		23,110											119,088			45,868
1830	89,954		41,750											174,734			6,321
1831	81,854		40,966											176,820			6,150
1832	309,971		70,000	14,000										868,971			10,048
1833	352,971		123,000	40,000										987,051			10,048
1834	336,692		106,244	34,000										487,748			18,439
1835	339,508		131,250	41,000										128,877			19,439
1836	433,132		148,211	35,000										632,438			11,665
1837	593,132		223,912	35,000										692,423			49,069
1838	443,675		453,875	17,000										831,478			108,483
1839	433,291		433,291	18,000										850,438			158,450
1840	534,692		213,615	18,000										739,338			139,683
1841	491,602		223,912	9,000										819,337			163,587
1842	447,038		273,748	9,000										945,414			125,894
1843	368,537		273,748	9,000										945,414			125,894
1844	368,537		594,692	23,500										945,414			125,894
1845	3,440		550	49,902										945,414			125,894
1846	447,038		320,254	30,254										1,108,201			141,183
1847	368,537		594,692	30,254										1,108,201			141,183
1848	368,537		594,692	30,254										1,108,201			141,183
1849	368,537		594,692	30,254										1,108,201			141,183
1850	368,537		594,692	30,254										1,108,201			141,183
1851	368,537		594,692	30,254										1,108,201			141,183
1852	368,537		594,692	30,254										1,108,201			141,183
1853	368,537		594,692	30,254										1,108,201			141,183
Total	9,563,686	12,713,870	23,295,296	707,616	3,247,440	3,713,536	294,683	845,232	59,639	43,060	491	3,639	43,060	491	3,639	43,060	231,508

POPULATION, CAPITAL, AND PRODUCTION.*

In presenting the following table, intended to exhibit a comparative view of the population, agriculture, and industrial resources of the United States, some explanation may be expected of the reasons which led to its compilation, in the face of the numerous and elaborate tables which have been laid before the public in the compendium of the census published by order of Congress. Among the numerous subjects of interest, in relation to which correct information is now so generally sought by all enlightened nations, those which illustrate not only the occupations of their population, and exhibit comparative views of the value of the productive industry between the various arts, trades, employments, and professions of a people, but also between the different sections of the same country, ought ever to be regarded of the utmost importance and entitled to the first consideration among enlightened statesmen. It is the value of the productive industry of a country which furnishes the true exponent of its wealth, power, and resources. It is by this we measure its prosperity, its advance in civilization, and its means of defence and security. But we search in vain throughout the publication above alluded to for a table which combines in one view an estimate of the value of the productive industry of the different sections or States of the Union, and of their comparative advance in wealth, power, and resources. We find numerous and elaborate tables, almost infinitely varied—many, indeed, of great value, others again of less importance, and some few, (costing much labor, too,) which perhaps will never be consulted. Although a census was taken of nearly all our valuable productions in detail, their values for the most part have been presented only in the aggregate of the whole United States, as seen in the 190th table. Congress was, in part, responsible for the omission, as there does not appear to have been any schedule ordered for ascertaining the value of the various agricultural productions enumerated. But it is not altogether clear whether the results obtained in this way would have been more satisfactory than those obtained by estimates carefully made by competent persons at Washington; and, as the head of the Census Bureau has undertaken to give an estimate of value of each kind of agricultural produce in the aggregate for the whole United States, it would have required less labor than has been expended on objects of minor importance to have presented an

* National Intelligencer.

estimate of value in detail—at least for each State—by which comparative views of the productive industry of each might have been presented. This having been unaccountably omitted, the object in compiling the following table has been an humble attempt to supply this defect as far as practicable, and thereby combine in one view all the most important elements in relation to population, capital, and production, so as to present comparative views of these between the different States of the Union. If this attempt should be the means of directing the public attention, and especially of those who may in future have in charge the preparation of these tables, to more full and perfect comparative views of the agricultural and other productive industry of the United States, the compiler of the present table will consider his labor not altogether in vain, in being the occasion of a more perfect accomplishment of the main object he had in view.

To present these views in the most satisfactory and instructive way it has been thought best to divide the United States into four characteristic geographical sections. 1. The large southern and southwestern section, engaged extensively in the cultivation of the great staples of cotton, sugar, and rice, with Indian corn as the principal element of subsistence. 2. The southern and southwestern section, engaged principally in the cultivation of grain, tobacco, and hemp, and the rearing of live stock, in which slave labor is employed to a considerable extent, though not upon so large a scale as in the first section. 3. The large northern and northwestern section, engaged very extensively in growing all kinds of grain, hay, root crops, and other agricultural productions of less value. 4. The eastern section, where manufacturing and mechanic arts form leading branches of industry in most of these States, combined with agricultural products, consumed almost exclusively at home, with dairy husbandry also, and fishing and navigation in most of them.

It would have occupied more time and labor than the compiler of the following table could have found it convenient to bestow to have embraced in it all the States. At the same time, he believed it sufficient for the purpose in view to select sixteen of the States, as best calculated, in his opinion, to exhibit not only a fair average of the whole as well as of each section, but also the extremes in the same respect, leaving out, for obvious reasons, all those States which have been admitted into the Union within a period of twenty years, with a single exception, and that in order to avoid a greater objection.

In regard to the estimate of value—the only part of the subject presenting difficulty in arriving at satisfactory results, and requiring more labor than all the rest of the table—it is proper that some explanation should be given. With the exception of a few great leading staple articles, the value has been fixed at the average prices prevailing at the close of the year 1850, and the first part of the year following, in a few of our largest commercial cities, north and south, where the prices have been quoted. If lower rates prevailed in the interior, the difference was made up of the cost of transportation to market; and, as this was mostly earned by the States producing the commodities, it was conceived that this mode of estimating the value was less liable to objection than any other deemed practicable. With respect to the leading articles above alluded to, it was believed that it would be generally more satisfactory and obtain fairer results to assume an average price, running from three to five years, before and after the month of June, 1850, and make this average the basis of the estimate of value. Accordingly a uniform rate for these commodities has been adopted, as follows: Indian corn, 75 cents per bushel; wheat, \$1 25 per bushel; cotton, 9 cents per pound, average; sugar, 5 cents per pound, average; tobacco, 7 cents per pound, average; rice in the rough, being returned in this way, 2½ cents per pound; oats, 50 cents per bushel; hay, \$15 per ton; potatoes, (Irish,) 50 cents per bushel; ditto, sweet, 40 cents per bushel. The same price has been affixed to the same commodity produced in every part of the United States. The prices assumed as above have been deemed fair relative rates of value; and it is believed that no scale of prices, though varying considerably from these rates, would have materially varied the comparative result, provided the relative value had been preserved with equal fairness.

It is not to be supposed that it is possible to arrive at anything but an approximation to the truth in statistical results. To expect absolute truth would be unreasonable, and those insisting on such an impracticable certainty would soon find it necessary to abandon this field of inquiry. It is sufficient for all useful purposes that we are able to reach an approximation to the truth; and it is, at the same time, undeniable that these approximations are much nearer the exact truth, in the general results, than many would be disposed to imagine. This could be demonstrated in various ways and verified in numerous instances.

Comparative view of the population, land, capital, agricultural, and other productive industry of the United States, compiled from the Census of 1850.

	The sixteen States of the Union selected for comparison.	Aggregate population of 16 States: white, colored, and slaves.	Population per square mile: white, colored, and slaves.	Ratio of increase in the last decade to 1850.	No. of farms in each State named.	No. of acres of improved land.	No. of acres of unimproved land.	Average size of farms, acres.	Average cash value of farms.	Average cash value per acre.	Average production Ind'n corn, &c., & r. acre.	Average production of wheat per acre.	Total amount of production of each State for the year 1850.	Average production per head of the whole population.	Order of precedence in production, in sources.
Three southern and southwestern cotton-growing States.	Alabama.....	771,633	15.21	30.63	41,964	4,485,614	7,702,067	289	\$1,588	\$5.80	15	5	\$37,647,459	\$74.07	9
	Georgia.....	906,185	15.63	31.07	51,759	6,378,479	16,442,900	447	1,550	4.90	16	5	63,797,659	70.03	14
	South Carolina.....	648,507	22.75	12.47	29,967	4,072,551	12,145,049	541	2,750	5.03	11	8	42,859,337	64.00	15
	Average.....		17.86	24.72	41,920	4,962,314	12,096,673	423	2,044	4.93	16	6		69.06	
Four southern and southwestern grain-growing States.	Kentucky*.....	969,405	26.07	35.96	74,777	5,968,270	10,981,478	927	2,073	9.13	24	3	87,721,987	89.08	4
	Maryland.....	538,034	52.41	24.04	21,860	2,797,905	1,586,445	213	3,998	18.79	23	18	40,707,467	70.00	13
	Missouri*.....	682,044	11.67	77.75	54,453	2,885,426	6,794,245	179	1,161	6.49	34	11	50,219,488	86.08	6
	Virginia.....	1,481,661	33.17	14.67	77,013	10,860,135	15,793,176	840	2,810	8.27	13	7	55,051,637	59.08	16
	Average.....		27.91	35.60	57,024	5,491,154	8,901,056	389	2,516	10.67	25	10		75.05	
Six northern and northwestern grain-growing States.	Indiana*.....	988,416	29.94	44.11	93,896	5,046,548	7,746,879	186	1,463	10.69	33	13	80,354,477	81.03	7
	Michigan.....	397,654	7.07	87.84	34,059	1,929,110	2,454,780	129	1,521	11.79	32	10	29,453,896	74.00	10
	Ohio*.....	1,980,339	49.55	30.53	143,810	9,551,498	8,146,000	125	2,495	19.96	36	13	149,577,503	75.05	8
	New Jersey.....	489,555	56.41	81.14	23,905	1,767,991	984,955	115	5,050	47.21	33	11	44,140,708	90.01	3
	New York.....	2,097,384	65.90	27.52	170,612	12,406,964	6,710,130	117	3,250	23.76	27	13	269,437,323	86.09	5
	Pennsylvania.....	2,811,756	50.26	34.09	197,577	8,623,619	6,294,726	118	3,197	27.82	20	15	162,968,245	70.05	11
	Average.....		45.10	62.48	93,980	6,004,620	5,339,577	192	2,824	24.26	30	13		79.07	
Three eastern agricultural and manufacturing States.	Connecticut.....	370,793	79.88	19.63	32,445	1,768,178	615,701	106	3,240	81.56	40		40,489,655	109.02	1
	Massachusetts.....	964,514	127.50	31.81	34,069	2,133,436	1,232,576	99	3,108	81.83	31	16	102,905,849	103.05	2
	Vermont.....	314,120	80.76	7.59	29,763	2,601,409	1,594,418	189	2,129	15.50	38	13	21,861,184	70.00	12
	Average.....		79.19	30.67	28,759	2,237,674	1,190,896	114	2,823	26.13	34	15		94.02	

* There does not appear to have been any returns or estimates for horses, mules, and other live stock from these States and some others driven to various markets and sold or slaughtered for market, which would have considerably enlarged the estimate of their productive industry.

Upon a careful examination of the above table the following comparative results, taking the average of the different sections in the table, would appear too obvious to escape attention, and from the constant order of succession in which they occur would seem to depend upon some fixed law or constantly operating cause calculated to invite the attention and investigation of political economists and statesmen :

1. Farms regularly diminish in size, taking the average of the different geographical sections of the table, as we proceed from south to north and east.

2. The proportion of improved to unimproved land occupied or appropriated regularly increases, taking the averages in sections as above from south to north and east, and this occurs irrespective of the density of population, taking in the whole area of the States compared.

3. The cash value of farms, both in the aggregate and per acre, regularly increases, as averaged in sections of the table, from south to north and east, and this result is in most instances irrespective of the density of the population.

4. The production of Indian corn and wheat averaged in the geographical sections of the table increases without an exception from south to north and east.

5. The production of Indian corn, as compared in States of the same geographical section, diminishes in the older States south, and increases in the older States north and east, on the Atlantic slope. Pennsylvania, and perhaps Georgia, are exceptions. It observes the same general law in the south-western and north-western States, separately considered.

6. It is worthy of special attention that the productive industry of the people of the United States *per capita* observes the same general law as landed capital and agricultural produce, and regularly increases from south to north and east, averaged in sections as above ; but, when States in the same geographical section are compared, presents frequent exceptions, and when sections are separately considered, and the States therein compared, seems to depend mainly on the fertility of the soil (whether natural or artificial) and the amount of labor put in motion in manufacturing and the mechanic arts. Alabama, Kentucky, Missouri, New Jersey, New York, Connecticut, and Massachusetts are instances where these two elements, separately or combined, have produced highly favorable results in their respective sections.

7. The density of population and the ratio of increase are also favorably influenced, as we would naturally conclude, by these two important elements of productive industry, and found generally to be accelerated in those States where either

the fertility of the soil and the facility of acquiring it, or where abundant moneyed capital is constantly inviting new accessions of labor in manufacturing or mechanic arts and kindred branches of industry. Of the States selected for comparison Georgia and Alabama, of the southern and southwestern cotton-growing States; Maryland, Kentucky, and Missouri, of the southern and southwestern grain-growing States; Pennsylvania, New Jersey, Indiana, and Michigan, of the northern and northwestern grain-growing States; and Massachusetts, of the eastern States, are conspicuous instances in the last decade where these two causes, separately or combined, have favorably influenced the increase of population.

JUNE 11, 1855.

HAMILTON.

MASSACHUSETTS--REMOVING JUDGE LORING.

The Boston Monthly Law Reporter presents an able article reviewing this flagitious act, denouncing it in the terms it deserves, and concluding with the following :

That Judge Loring has violated no law of Massachusetts ; that he had no reason to suppose that his acting as a commissioner in the Burns case would be offensive to the people of Massachusetts; that, in fact, it was not; that this persecution is owing not to such acting, but to his decision; that his conduct during the trial was distinguished by humanity, firmness and conscientiousness; that he has neglected no duty of his office as judge of probate; that no complaint has been preferred against him for any short-coming in that office; that he is, in fact, in every way deserving of the confidence of the community; these are facts which we fully believe, and which, we think, can only be denied by men whose moral vision is distorted by party prejudices. We fear that this violation of the judiciary department, this cruel injustice to the individual man, will be consummated, as has already been indicated by the votes of the House of Representatives, and the Senate. Be it so.

Non si male nunc et olim
Sic erit.

The party that made the attack on the judiciary in 1843, by reducing the salaries of the judges of the Supreme Court, never had much reason to boast of their success. In the very next year, probably from this very act, they were in a hopeless minority, and saw their work undone.

We think it obvious that the course which is now pursued against Judge Loring by the opponents of the United States

law of 1850, is a very impolitic one, so far as the real interests of fugitives from labor is concerned. Whatever be the character of that law—nay, the more unjust and oppressive its character—it is for the interest of all except those who may wish to make political capital by agitation, that its application should be left in pure hands. The law of 1850 has been pronounced constitutional by the Supreme Court of Massachusetts and the Circuit Court for this district, and its enforcement is inevitable until it is repealed. Whenever cases may be presented under it, any commissioner who consents to act, may be compelled, if he is a man of any pretension to character, and is not prepared to oppose these decisions, to send back a fugitive.

As long as the law remains in force, men will be found who will act as commissioners, and exercise jurisdiction under it. The bar of this commonwealth, and especially of the county of Suffolk, is not so select as it once was. There are as many good and true men at it as ever, but there are more of an inferior moral standard than there used to be. Now if every man who acts as a magistrate to enforce the law of 1850 is to be persecuted as Judge Loring has been, it is very easy to see that the commissioners must soon be a class by themselves, to whom the mere profits of the office will be a sufficient inducement to brave public opinion, and who will have a direct interest in every case in pronouncing against the fugitive, and with very little principle to deter them from pursuing that interest. When there is a law of such a nature on the statute book, that to pronounce decrees under it in favor of the claimant may be supposed to be the sure way to political favor at the south, and with the general government, and is also doubly more advantageous to the magistrate in a pecuniary point of view, it is all-important to have very pure and honest and strong men to administer it, lest they fall into temptation. The existing commissioners are, we believe, all of them men of entirely irreproachable private character. So far as we know, they are, every one of them, men whose whispered word would (excepting the accidents of life) be considered as good security as their sealed bond. Now if such men are driven out by party rancor from the offices which they hold, it is manifest that the vacated offices must be filled by descending to a lower level, and employing others of an inferior character. We have already been told of one case, and are informed that many others have occurred, where the commissioners have been applied to act under this law in a covert and unfair manner, and that they have refused so to act. This is no merit in them. But men might be in

office who would not be so scrupulous, and whatever odious features there may be in the law might be aggravated by the mode of its administration. While the office of commissioner is filled by such persons as the present incumbents, there is no danger of this kind. We hope they will continue so to be filled while the law remains in force.

In writing this article, we wish most expressly to disclaim expressing any feeling or opinion in favor of the United States law of 1850. We have been dealing only with the question of the judiciary department in Massachusetts. That while the Constitution and the Union endure, the south, under that constitution, are entitled to some law or some means to enable them to reclaim their fugitive slaves cannot be questioned. That the people of any one State are ready to give up the Constitution and the Union on this issue we cannot, we are unwilling to, believe. But we do most sincerely dislike and object to the most odious provisions of this law. We would do as little in obedience to it as is possibly consistent with our duty as citizens, and as persons who, in various capacities, have sworn to obey the laws of the United States. We would strive and hope for its repeal or modification.

But Massachusetts will come to this work with an ill grace if she come with the stigma upon her of having violated the integrity of her judiciary to serve the purposes of a party.

WHAT THE SOUTH IS NOW THINKING AND SAYING ABOUT THE COURSE OF THE NORTH.

We begin first with an extract from the Montgomery Mail:

1. **THE TEMPER OF THE SOUTH.**—Concerning the slavery question, the south has not been for many years in so quiet a mood. There is a perfect placidity of sentiment throughout the slave States. We have no indignation meetings—no torrents of declamation and denunciation—no fiery threatening resolutions. For all these there is a deep, deep calm. And the reason is, that at length, after decades of bickerings, the whole section is agreed that the day is at hand. At length—at length, and for the first time in many a long year—the south occupies her true position, untrammelled by thrice accursed “compromises,” and looking only to the Constitution for the measure of her rights. For the first time, too, she sees her fanatical enemies clothed with full power to do their will, in the House of Representatives of the United

States. And thus there is made, for the first time, the true issue between the north and the south. How it will be decided is another question, but it is glorious that it is to be decided; that a few short months will give the conflict its culmination; and that whether the hordes of free-soilers and abolitionists are driven back impotent, overpowered by the innate conservatism of the whole people, or the south is compelled to withdraw from a government which is fast becoming her greatest enemy—in either event, our real relations with the antagonist section will be brought out in bold relief. The day of hypocrisy and duplicity will be over; our friends will be our friends, and our enemies our enemies.

There never was a time so full of hope for the south, and for the maintenance and the extension of slavery. The wit of man could not devise for us a better relation than that which we occupy to the forces of free-soilism. We battle not for half our rights, but for the whole. Our enemies have ample power in one House to do that thing which all parties in the south have said shall be cause for dissolution; and for all the purposes of detriment to the south the action of that House will be as potent as if the deed could be carried through all the parliamentary processes necessary to make it a law. The representatives who thus control the House are incited by frantic, howling constituencies at home. Can they recede? The south cannot. If she did, Cuban vassalage would be too mild a doom for her degenerate sons.

Out of this "nettle, danger," if the south has true men in Congress, shall she "pluck the flower, safety." The whole people of the south see the question as it really is. They are assured, at last, and are rejoiced by the assurance, that *pro-slavery* and *no-slavery* are at length to have an honest, fair, open fight—and they have courage and faith. The south can only fail of success and a bright future, on a supposition which is almost an insult to her to make—that she would consent to remain in the Union, after one branch of the national legislature had made a deliberate attack upon her rights, by a repeal of the fugitive slave law, or the passage of a bill abolishing slavery in the District of Columbia.

So we say, the "good time" is nearly come. God hasten it! Our people see its approach, and hail it with *quiet* satisfaction. There is no need for noise, the final contest is just ahead, and we could not avoid it if we would, nor would we if we could.

2. SOUTHERN REMEDIES.—The following is from the New Orleans Bulletin :

Under the "personal liberty law" no open action as yet has taken place. Even the public gazettes have scarcely noticed the subject, so far as I can ascertain. Our people are scattered for the summer, hundreds spending their money in pleasure excursions or purchases in Massachusetts. No, my good friends of Bunker Hill and Lexington, (and long may I be permitted to address you as such,) there has been as yet no open action. Some of our bees and butterflies have fluttered off among you, but we who are toiling here at home consult together about your "liberty law" and other movements, and I have leave to tell you some things which are more than hinted at if such laws are to be enforced.

First.—Excluding your ships.

Second.—Excluding your manufactures.

Third.—Ceasing our visits to your borders, already unsafe, and more or less unpleasant.

Fourth.—Requiring your citizens trading here at least to take out licenses, perhaps to furnish bond for good behavior.

How will such laws suit you? Of course not at all. They trench on that provision of the Constitution which declares that the citizens of each State shall be entitled to all the privileges and immunities of citizens in the several States. They certainly do, my conscientious friends, and such laws operate against all other rights the people of the several States have in other States under the its Federal Constitution. We know it; but we know also that this is precisely our objection to this "liberty law," which has made all the trouble, and that its unconstitutionality has been pronounced by our highest tribunals.

All your reasoning would have done very well, so long as you held to your bargain—so long as you yourselves submitted to the paramount law, and recognized our rights under its guarantees—so long as Massachusetts held to her obligations and place in the great American family. But now you have repudiated a right of most vital importance to us, and passed a law to fine and imprison as felons our citizens who may claim their rights under that Constitution. Why wait for a formal rupture and separation from you? You have not done so. Our compact is broken by *you*. There is little obligation on us to respect the rights of your citizens or their property, when you openly trample on ours. There is as little to restrain a mob from taking possession of one or more of your ships, as there was to restrain your mob in the case of

the negro Burns, from their assaults on the court and its officers, and from murdering the marshal, Batchelder. Your law now virtually justifies and sanctions that and all future murders.

No reason warrants or palliates your conduct which would not, with greater force, justify our course. Your acts will be the cause—our's but the effect and sequence. Should such a state of affairs happen as I have here forshadowed, of course you will do us all the mischief you can. This we expect, come what may. For several years past you have given us an earnest of what you have been doing. Nor have Pennsylvania and others of you been idle. (Has the law yet revenged the murder of Gorsuch?) Many of us are of opinion that you can do nothing much worse than you are doing. If you imagine the loss of your merchandise, manufactures and supplies will distress and injure us, you greatly mistake. We can wear our old clothing another year, though we should receive none from abroad; and that year will suffice to set head and hands enough at work to remedy all. Our climate is mild, our soils fertile; we can live within ourselves. Look around and examine how many resources we have, even could you induce all the New England States to combining. We have only to look ahead—to those who will be delighted at the chance of supplying us, and whom we can and do amply supply with the raw materials—it indeed we do not take both supply and demand into our own hands, of which there are some very significant indications.

Let us take the case of a transaction in common life—the case of a man who has purchased property and given his bond to pay the price, but finds that the seller has contrived to obtain possession of that property. Do the laws of the land, the laws of honesty or morality, require him to pay his bond? Here is a plain question of common, every day business, to be plainly and categorically answered. If neither the laws of the land nor the laws of morality require it, in what code will you find the law which requires one party to a compact, individual or State, to fulfil his obligations after the other has broken and denied his part of their agreement? Perhaps you may find it in that higher law which has been referred to to sustain your abolition pretensions, for nowhere else can it be found?

You have administered mob law to many of our citizens. This personal liberty law is but the enactment of a mob-legislature, reckless of their oaths to support the Constitution

of the United States. We desire not to be learned in such law, or to touch the unclean thing. We abhor it. But we refer to it to remind you of what you seem to think is to be used by you alone; to admonish you that with your violation of our chartered rights there may arise the recollection of our own resources in the way of *lex talionis*, and your citizens at home, as well as here, may realize the vulgar adage that "Two can play at that game." FAIR PLAY.

P. S.—At a future day you may hear from me again; the subject is far, very far from being exhausted, or even fairly unfolded.

COOPER'S WELL, MISSISSIPPI, *June 17, 1855.*

3. THE SLAVE ROSETTA.—The following shows the public sentiment of Kentucky in regard to the decision in Ohio setting free a Kentucky slave:

The meeting was organized by the appointment of Ed. D. Hobbs, president; S. Churchill, John Herr, —Anderson, vice presidents; Captain W. J. Heady, Secretary.

The following gentlemen were appointed to report resolutions expressive of the sense of the meeting:

W. C. Bullitt, chairman; Daniel Doup, George Hancock, N. Wolfe, Sherrod Williams, R. N. Miller, Dr. R. Miller, Wm. Short, Ben. Cassiday, Capt. W. J. Heady, Jno. O. Bullock, Dr. Senteney, Jno. Downey, Joshua F. Bullitt, Gibson Mallory, Peter Funk.

The following report was made and unanimously adopted:

PREAMBLE.—It is a point of our public political faith, that the provisions of the Constitution should be faithfully and honestly carried out, and on no subject is this duty more imperative than that of slavery. The discharge of this great political duty is alike binding on the States and the general government, and recreancy in either must prove fatal to the Union.

We claim no right for the citizens of Kentucky which we are not willing to extend to others, and, whilst we utterly disclaim any disposition to interfere with the local policy of other States in reference to the institution of slavery, we do most solemnly protest against any and all interference on their part with rights guaranteed to us by the Constitution of the State and that of the Union.

The principles asserted by the State courts of Ohio and other free States have at last reached a point at which the tenure of property is rendered fatally insecure, and our equal rights as American citizens utterly disregarded. Our people can no longer remove with their property from one slave

State to another. or navigate our great western rivers, the common property of all, without being exposed to insult and injury, and deprivation of property under the sanction of the law.

This policy is not only levelled at a domestic institution, over which the State of Kentucky has exclusive cognizance, but is a practical and direct interference with our commercial interests. Neither the State of Ohio nor any other State has the right, under the Constitution of the United States, to deny to the people of Kentucky the free navigation of the Ohio and the Mississippi rivers, and to use their slave labor for that purpose. It is the high and solemn duty of the general government to protect us in the free and undisturbed exercise of these rights.

In the present disturbed and excited state of public sentiment our hope is in the faithful administration of the laws by the federal authorities. We look to the Constitution of the United States, and the patriotic and enlightened spirit in which it originated, as our protection against the inroads of that fanaticism which would deprive us of our rights. The supreme judiciary is the final arbiter to which we must appeal before we relinquish all hopes of an adjustment of this difficult and portentous question.

We cherish the confident belief that the provisions of the Constitution, and the laws made in pursuance thereof, are fully adequate to our protection, and, when rightly understood and properly enforced, will secure the just rights of all.

Resolved, 1st. In view of these principles, we take pleasure in bearing testimony to the manly, bold, and disinterested course of our fellow-citizen, the Rev. Henry M. Dennison, in appealing, though in vain, to the constituted authorities for a vindication of his rights; we say *disinterested* because it is generally understood by the people of Kentucky, that the cost of recovering a slave under the Fugitive Slave Law usually exceeds the value of the slave.

2d. That, as citizens of Kentucky, we feel an honest pride that he did not shrink from the faithful discharge of his duty as a believer.

3d. That H. H. Robinson, United States marshal in Ohio, is entitled to our thanks for the bold and faithful discharge of his duty as an officer on the occasion aforesaid.

4th. That it is the duty of the State of Kentucky to do all things necessary, and which are not prohibited by the Constitution of the United States, for the protection of her citizens against the oppressions by the legal authorities of other States.

5th. That the next legislature of Kentucky are hereby requested to appropriate such sum of money as may be needed to pay all the losses, expenses, costs and damages which the Rev. Henry Dennison has incurred or may incur, by reason of the illegal interference of the State courts of Ohio, and by reason of two suits now pending against him in Ohio, and any other suits that may arise out of his attempt to assert his right to the slave Rosetta. And that such sums of money as Kentucky may pay in consequence of unlawful aggressions, by the legal authorities of Ohio, be demanded of the government of Ohio by the government of Kentucky, and suit brought, if necessary, in the Supreme Court of the Union.

6th. Our right of transit through the free States, with our slaves, is a perfect right under the Constitution of the Union.

7th. That the people of every county of Kentucky and of the city of Louisville are earnestly entreated in mass meeting to express their opinion on the subject of the foregoing resolutions.

8th. That the editors of each newspaper in Kentucky are respectfully requested to publish these proceedings.

9th. That the people of Kentucky hold themselves ready, as they ever have done, to aid the general government in vindication of the supremacy of its Constitution and laws and the overthrow of nullification, come from what quarter it may.

10th. Wm. C. Bullitt, Samuel S. Geiger, George Hancock, and Edward D. Hobbs, are appointed a corresponding committee, for the purpose of calling the attention of the other counties of this State to this matter and invoking their aid, by calling mass meetings of the people, and sending petitions to the next legislature.

This committee are also instructed to visit Frankfort on the second Monday of the session of the legislature and lay these our resolutions and proceedings before them.

LAFITTE, "THE PIRATE"—EARLY TIMES IN THE SOUTHWEST.

Several years ago we became involved in a discussion relating to the character and deeds of Lafitte, a name so often referred to in the chronicles of the southwest. One of the editors of the New Orleans Delta was the leading party in the discussion, and he has lately gone over the whole field of Lafitte's life and times in one of the numbers of that paper. The

subject is one of such wide interest that we transfer with pleasure the entire chapter to our pages. It is one of a series of papers published in that journal entitled Jackson and New Orleans.

About one mile above New Orleans, opposite the flourishing city of Jefferson, and on the right bank of the Mississippi, there is a small canal, now used by fishermen and hunters, which approaches within a few hundred yards of the river's bank.

The small craft that ply on this canal are taken up on cars which run into the water by an inclined plane, and are then hauled by mules to the river. Launched upon the rapid current of the Mississippi, these boats are soon borne into the crescent port of New Orleans. Following this canal, which runs nearly due west for five or six miles, we reach a deep, narrow, and tortuous bayou; descending this bayou, which for forty miles threads its sluggish course through an impenetrable swamp, we pass into a large lake, girt with sombre forests and gloomy swamps, and resonant with the hoarse croakings of alligators and the screams of swamp fowls.

From this lake, by a still larger bayou, we pass into another lake, and from that to another, until we reach an island, on which are discernable, at a considerable distance, several elevated knolls, and where a scant vegetation and a few trees maintain a feeble existence. At the lower end of this island there are some curious aboriginal vestiges, in the shape of high mounds of shells, which are thought to mark the burial of some extinct tribes of aborigines. This surmise has been confirmed by the discovery of human bones below the surface of these mounds. The elevation formed by the series of mounds is known as the Temple, from a tradition that the Natchez tribes of Indians used to assemble there to offer sacrifices to their chief deity, the "Great Sun." This lake or bayou finally disembogues into the Gulf of Mexico by two outlets, between which lies the beautiful island of Grand Terre.

This island is a pleasant sea-side resort, having a length of six or eight miles, and an average breadth of a mile and a half. Towards the sea it presents a fine beach, where those who love "the rapture of the lonely shore, who delight in the roar and dash of the foaming billows, and in the ecstasy of a bath in the pure, bracing surge, may find abundant means of pleasure and enjoyment.

Grand Terre is now occupied and cultivated by a Creole family, as a sugar plantation, producing annually four or

five hundred hogsheads of sugar. At the western extremity of the island stands a large and powerful fortification, which has been quite recently erected by the United States, and named after one of the most distinguished benefactors of Louisiana, Edward Livingston. This fort commands the western entrance or strait leading from the Gulf into the lake or bay of Barataria. Here, safely sheltered, some three or four miles from the Gulf, is a snug little harbor, where vessels drawing from seven to eight feet of water may ride in safety, out of the reach of the fierce storms that so often sweep the Gulf of Mexico.

Here may be found, even now, the foundations of houses, the brick-work of a rude fort, and other evidences of an ancient settlement. This is the spot which has become so famous in the history and romance of the southwest, as the "Pirate's Home," the retreat of the dread corsair of the Gulf, whom the genius of Byron and of many succeeding poets and novelists has consecrated as one who

"Left a corsair's name to other times,
Linked with one virtue and a thousand crimes."

Such is poetry—such is romance. But authentic history, by which alone these sketches are guided, dissipated all these fine flights of the poet and romancer.

Jean Lafitte, the so-called pirate and corsair, was a blacksmith from Bordeaux, France, who, within the recollection of several old citizens now living in New Orleans, kept his forge at the corner of Bourbon and St. Phillip streets. He had an older brother, Peirre, who was a sea-faring character, and had served in the French navy. Neither were pirates, and Jean knew not enough of the art of navigation to manage a jolly boat. But he was a man of good address and appearance, of considerable shrewdness, of generous and liberal heart, and adventurous spirit. Shortly after the cession of Louisiana to the United States, a series of events occurred which made the Gulf of Mexico the arena of the most extensive and profitable privateering. First came the war between France and Spain, which afforded the inhabitants of the French islands a good pretence to depredate upon the rich commerce of the Spanish possessions—the most valuable and productive in the New World. The Gulf of Mexico and Carribean sea swarmed with privateers, owned and employed by men of all nations, who obtained their commissions (by purchase) from the French authorities at Martinique and Gaudaloupe. Among these were not a few neat and trim crafts belonging to the staid citizens of New England, who,

under the tri-color of France, experienced no scruples in perpetrating acts which, though not condemned by the laws of nations, in their spirit as well as in their practical results, bear a strong resemblance to piracy. The British capture and occupation of Gaudaloupe and Martinique, in 1806, in which expeditions Col. Edward Pakenham, who will figure conspicuously in these sketches, distinguished himself, and received a severe wound, broke up a favorite retreat of these privateers. Shortly after this, Columbia declared her independence of Spain, and invited to her port of Carthage the patriots and adventurers of all nations, to aid her struggle against the mother country. Thither flocked all the privateers and buccaneers of the Gulf. Commissions were promptly given or sold to them to sail under the Columbian flag, and to prey upon the commerce of poor old Spain, who, invaded and despoiled at home, had neither means nor spirit to defend her distant possessions. The success of the privateers was brilliant. It is a narrow line, at the best, which divides piracy from privateering, and it is not at all wonderful that the reckless sailors of the Gulf sometimes lost sight of it. The shipping of other countries was, no doubt, mistaken for that of Spain. Rapid fortunes were made in this business. Capitalists embarked their means in equipping vessels for privateering. Of course they were not responsible for the excesses which were committed by those in their employ, nor did they trouble themselves to inquire into all their acts. Finally, however, some attention was excited to this wholesale system of legalized pillage. The privateers found it necessary to secure some safe harbor, into which they could escape from the ships of war, where they could be sheltered from the northers, and where, too, they could establish a depot for the sale and smuggling of their spoils. It was a sagacious thought which selected the little bay or cove of Grande Terre for this purpose. It was called Barataria, and several huts and store-houses were built here, and cannon planted on the beach. Here rallied the privateers of the Gulf, with their fast-sailing schooners, armed to the teeth and manned by fierce-looking men, who wore sharp cutlasses, and might be taken anywhere for pirates, without offence. They were the desperate men of all nations, embracing as well those who had occupied respectable positions in the naval or merchant service, who were instigated to their present pursuit by the love of gain, as those who had figured in the bloody scenes of the buccaneers of the Spanish Main. Besides its inaccessibility to vessels of war, the Bay of Barataria recommended itself by another important consideration: it

was near to the city of New Orleans, the mart of the growing valley of the Mississippi, and from it the lakes and bayous afforded an easy water communication, nearly to the banks of the Mississippi, within a short distance of New Orleans. A regular organization of the privateers was established, officers were chosen, and agents appointed in New Orleans, to enlist men and negotiate the sale of goods.

Among the most active and sagacious of these town agents was the blacksmith of St. Phillip street, who, following the example of much greater and more pretentious men, abandoned his sledge and anvil, and embarked in the lawless and more adventurous career of smuggling and privateering. Gradually by his success, enterprise, and address, Jean Lafitte obtained such ascendancy over the lawless congregation at Baratavia, that they elected him their captain or commander. There is a tradition that this choice gave great dissatisfaction to some of the more warlike of the privateers, and particularly to Gambio, a savage, grim Italian, who did not scruple to prefer the title and character of "pirate," to the puling, hypocritical one of "privateer." But it is said, and the story is verified by an aged Italian, one of the only two survivors of the Baratarians, now resident in Grande Terre, who rejoices in the "*nomme de guerre*," indicative of a ghastly sabre cut across the face of "*nez coupé*," that Lafitte found it necessary to sustain his authority by some terrible example, and when one of Gambio's followers resisted his orders, he shot him through the heart before the whole band. Whether this story be true or not, there can be no doubt that in the year 1813, when the association had attained its greatest prosperity, Lafitte held undisputed authority and control over it. He certainly conducted his administration with energy and ability. A large fleet of small vessels rode in the harbor, besides others that were cruising. The store houses were filled with valuable goods. Hither resorted merchants and traders from all parts of the country to purchase goods, which, being cheaply obtained, could be retailed at a large profit. A number of small vessels were employed in transporting goods to New Orleans, through the bayou we have described, just as oysters, fish and game are now brought.

On reaching the head of the bayou, these goods would be taken out of the boats and placed on the backs of mules, to be carried to the river banks, whence they would be ferried across into the city, at night. In the city they had many agents, who disposed of these goods. By this profitable trade, many of the citizens of New Orleans laid the foundations of their fortunes. But though profitable to individuals, this trade

was evidently detrimental to regular and legitimate commerce, as well as to the revenue of the federal government. Accordingly, several efforts were made to break up the association, but the activity and influence of their city friends generally enabled them to hush up such designs. Legal prosecutions were commenced on the 7th of April, 1813, against Jean and Pierre Lafitte, in the United States district court for Louisiana, charging them with violating the revenue and neutrality laws of the United States. Nothing is said about piracy, the gravest offence charged being simply a misdemeanor. Even these charges were not sustained, for, although both the Lafittes and many other of the Baratarians, were captured by Captain Andrew Holmes, in an expedition to the lakes, about the time of the filing of these informations against them, yet it appears they were released, and the prosecutions never came to trial, the warrants for their arrest were returned "not found." These abortive proceedings appear to have given encouragement and vigor to the operations of the Baratarians. Accordingly, we find on the 28th of July, 1814, the grand jury of New Orleans making the following terrible exposure of the audacity and extent of these unlawful transactions: "The grand jury feel it a duty they owe to society to state that piracy and smuggling, so long established and so systematically pursued by many of the inhabitants of this State, and particularly in this city and vicinity, that the grand jury find it difficult legally to establish facts, even where the strongest presumptions are offered."

"The grand jury, impressed with a belief that the evils complained of have impaired public confidence and individual credit, injured the honest fair trader, and contributed to drain our country of its specie, corrupted the morals of many poor citizens, and finally stamped disgrace on our State, deem it a duty incumbent on them, by this public presentation, again to direct the attention of the public to this serious subject, calling upon all good citizens for their most active exertions to suppress the evil, and by their pointed disapprobation of every individual who may be concerned, directly or indirectly, in such practices, in some measure to remove the stain that has fallen on all classes of society in the minds of the good people of our sister States."

The report concludes with a severe reproof of the executive of the State, and of the United States, for neglecting the proper measures to suppress these evil practices.

The tenor of this presentation leads us to the belief that the word piracy, as used by the grand jury, was intended to

include the more common offences of fitting out privateers within the United States, to operate against the ships of nations with which they were at peace, and that of smuggling. Certainly the grave fathers of the city would not speak of a crime, involving murder and robbery, in such mild and measured terms, as one "calculated to impair public confidence and injure public credit, to defraud the fair dealer, to drain the country of specie, and to corrupt the morals of the people." Such language, applied to the enormous crime of piracy, would appear quite inappropriate, not to say ridiculous. It is evident from this, as well as other proofs, that the respectable citizens, several of whom now survive, who made this report, had in view the denunciation of the offence of smuggling into New Orleans goods captured on the high seas, by privateers, which no doubt seriously interfered with legitimate trade, and drew off a large amount of specie.

However, indictments for piracy were found against several of the Baratarians. One against Johnness, for piracy on the Santa, a Spanish vessel, which was captured nine miles from Grand Isle, and nine thousand dollars taken from her; also against another, who went by the name of Johannot, for capturing another Spanish vessel, with her cargo, worth thirty thousand dollars, off Trinidad. Pierre Lafitte was charged as aider and abettor in these crimes before and after the fact, as one who did, upon land, to-wit: in the city of New Orleans, within the district of Louisiana, knowingly and willingly aid, assist, procure, counsel and advise the said piracies and robberies. It is quite evident from the character of the ships captured, that had the indictments been prosecuted to a trial, they would have resulted in modifying the crime of piracy into the offence of privateering, or that of violating the neutrality laws of the United States, by bringing prizes taken from Spain into its territory and selling the same.

Pierre Lafitte was arrested on these indictments. An application for bail was refused, and he was incarcerated in the Calaboose, or city prison, now occupied by the sixth district court of New Orleans.

These transactions, betokening a vigorous determination on the part of the authorities to break up the establishment at Barataria, Jean Lafitte proceeded to that place and was engaged in collecting the vessels and property of the association, with a view of departing to some more secure retreat, when an event occurred, which he thought would afford him an opportunity of propitiating the favor of the government, and securing for himself and his companions a pardon for their offences.

It was on the morning of the second of September, 1814, that the settlement of Baratavia was aroused by the report of cannon in the direction of the Gulf. Lafitte immediately ordered out a small boat, in which, rowed by four of his men, he proceeded toward the mouth of the strait. Here he perceived a brig of war, lying just outside of the inlet, with the British colors flying at the masthead. As soon as Lafitte's boat was perceived, the gig of the brig shot off from her side and approached him.

In this gig were three officers, clad in naval uniform, and one in the scarlet of the British army. They bore a white signal in the bows, and a British flag in the stern of their boats. The officers proved to be Capt. Lockyer, of his majesty's navy, with a lieutenant of the same service, and Capt. McWilliams, of the army. On approaching the boat of the Baratarians, Lockyer called out his name and style, and inquired if Mr. Lafitte was at home in the bay, as he had an important communication for him. Lafitte replied, that the person they desired could be seen ashore, and invited the officers to accompany him to their settlement. They accepted the invitation, and the boats were rowed through the strait into the Bay of Baratavia. On their way Lafitte confessed his true name and character; whereupon Captain Lockyer delivered to him a paper package. Lafitte enjoined upon the British officers to conceal the true object of their visit from his men, who might, if they suspected their design, attempt some violence against them. Despite these cautions, the Baratarians, on recognizing the uniform of the strangers, collected on the shore in a tumultuous and threatening manner, and clamored loudly for their arrest. It required all Lafitte's art, address and influence to calm them. Finally, however, he succeeded in conducting the British to his apartments, where they were entertained in a style of elegant hospitality, which greatly surprised them.

The best wines of old Spain, the richest fruits of the West Indies, and every variety of fish and game were spread out before them, and served on the richest carved silver plate. The affable manner of Lafitte gave great zest to the enjoyment of his guests. After the repast, and when they had all smoked a cigar of the finest Cuban flavor, Lafitte requested his guests to proceed to business. The package directed to "Mr. Lafitte," was then opened and the contents read. They consisted of a proclamation addressed, by Colonel Edward Nicholls, in the service of his Britannic Majesty, and commander of the land forces on the coast of Florida, to the inhabitants of Louisiana, dated Headquarters, Pensacola, 29th

August, 1814; also a letter from the same, directed to Mr. Lafitte, as the commander at Baratavia; also a letter from the Hon. Sir W. H. Percy, captain of the sloop-of-war *Hermes*, and commander of the naval forces in the Gulf of Mexico, dated September 1, 1814, to Lafitte; and one from the same Captain Percy, written on 30th August, on the *Hermes*, in the Bay of Pensacola, to Captain Lockyer of the *Sophia*, directing him to proceed to Baratavia, and attend to certain affairs there, which are fully explained. The originals of these letters may now be seen in the records of the United States district court in New Orleans, where they were filed by Lafitte. These letters contained the most flattering offers to Lafitte, on the part of the British officials, if he would aid them, with his vessels and men, in their contemplated invasion of the State of Louisiana. Captain Lockyer proceeded to enforce the offers by many plausible and cogent arguments. He stated that Lafitte, his vessels and men, would be enlisted in the honorable service of the British navy; that he would receive the rank of Captain, (an offer which must have brought a smile to the face of the unnautical blacksmith of St. Phillip street,) and the sum of thirty thousand dollars; that being a Frenchman, proscribed and persecuted by the United States, with a brother then in prison, he should unite with the English, as the English and French were now fast friends; that a splendid prospect was now open to him in the British navy, as from his knowledge of the Gulf coast he could guide them in their expedition to New Orleans, which had already started; that it was the purpose of the English government to penetrate the upper country and act in concert with the forces in Canada; that everything was prepared to carry on the war with unusual vigor; that they were sure of success, expecting to find little or no opposition from the French and Spanish population of Louisiana, whose interests and manners were opposed and hostile to those of the Americans; and, finally, it was declared by Captain Lockyer to be the purpose of the British to free the slaves, and arm them against the white people, who resisted their authority and progress. Lafitte, affecting an acquiescence in these propositions, begged to be permitted to go to one of the vessels lying out in the bay to consult an old friend and associate, in whose judgment he had great confidence. Whilst he was absent, the men who had watched suspiciously the conference, many of whom were Americans, and not the less patriotic because they had a taste for privateering, proceeded to arrest the British officers, threatening to kill or deliver them up to the Americans. In the midst of this clamor and violence, Lafitte

returned and immediately quieted his men, by reminding them of the laws of honor and humanity, which forbade any violence to persons who come among them with a flag of truce. He assured them that their honor and rights would be safe and sacred in his charge. He then escorted the British to their boats, and after declaring to Captain Lockyer that he only required a few days to consider the flattering proposals, and would be ready at a certain time to deliver his final reply, took a respectful leave of his guests, and escorting them to their boat, kept them in view until they were out of reach of the men on shore. Immediately after the departure of the British, Lafitte sat down and addressed a long letter to Mr. Blanque, a member of the House of Representatives of Louisiana, which he commences by declaring that "though proscribed in my adopted country, I will never miss an occasion of serving her, or of proving that she has never ceased to be dear to me." He then details the circumstances of Captain Lockyer's arrival in his camp, and encloses the letters to him. He then proceeds to say: "I may have evaded the payment of duties to the custom-house, but I have never ceased to be a good citizen, and all the offences I have committed have been forced upon me by certain vices in the laws." He then expresses the hope that the service he is enabled to render the authorities, by delivering the enclosed letters, "he may obtain some amelioration of the situation of an unhappy brother," adding, with considerable force and feeling, "our enemies have endeavored to work upon me, by a motive which few men would have resisted. They represented to me a brother in irons, a brother who is to me very dear, whose deliverer I might become, and I declined the proposal, well persuaded of his innocence. I am free from apprehension as to the issue of a trial, but he is sick, and not in a place where he can receive the assistance he requires." Through Mr. Blanque, Lafitte addressed a letter to Governor Claiborne, in which he stated very distinctly his positions and desires. He says:

"I offer to you to restore to this State several citizens, who, perhaps, in your eyes, have lost that sacred title; I offer you them, however, such as you could wish to find them, ready to exert their utmost efforts in defence of the country. This point of Louisiana which I occupy is of great importance in the present crisis. I tender my services to defend it, and the only reward I ask is, that a stop be put to the prosecutions against me and my adherents, by an act of oblivion for all that has been done hitherto. I am the stray sheep wishing to return to the sheepfold. If you are thoroughly acquainted

with the nature of my offences, I should appear to you much less guilty, and still worthy to discharge the duties of a good citizen. I have never sailed under any flag but that of the republic of Carthagena, and my vessels are perfectly regular in that respect. If I could have brought my lawful prizes into the ports of this State, I should not have employed the illicit means that have caused me to be proscribed. Should your answer not be favorable to my ardent desires, I declare to you that I will instantly leave the country to avoid the imputation of having coöperated towards an invasion on that point, which cannot fail to take place, and to rest secure in the acquittal of my own conscience."

Upon the receipt of these letters, Governor Claiborne convoked a council of the principal officers of the army, navy and militia, then in New Orleans, to whom he submitted the letters, asking their decision on these two questions: 1st. Whether the letters were genuine? 2d. Whether it was proper that the governor should hold intercourse or enter into any correspondence with Mr. Lafitte and his associates? To each of these questions a negative answer was given, Major General Villéré alone dissenting—this officer being (as well as the governor, who, presiding in the council, could not give his opinion,) not only satisfied as to the authenticity of the letters of the British officers, but believing that the Baratarians might be employed in a very effective manner in case of an invasion. The only result of this council was to hasten the steps, which had been previously commenced, to fit out an expedition to Barataria to break up Lafitte's establishment. In the meantime, the two weeks asked for by Lafitte to consider the British proposal having expired, Captain Lockyer appeared off Grand Terre, and hovered around the inlet several days, anxiously awaiting the approach of Lafitte. At last, his patience being exhausted and mistrusting the intentions of the Baratarians, he retired. It was about this time that the spirit of Lafitte was sorely tried by the intelligence that the constituted authorities whom he had supplied with such valuable information, instead of appreciating his generous exertions in behalf of his country, were actually equipping an expedition to destroy his establishment. This was truly an ungrateful return for services which may now be justly estimated. Nor is it satisfactorily shown that mercenary motives did not mingle with those which prompted some of the parties engaged in this expedition. The rich plunder of the "Pirate's Retreat," the valuable fleet of small coasting vessels that ride in the Bay of Barataria, the exaggerated stories of a vast amount of treasure, heaped up in glittering

piles, in dark mysterious caves, of chests of Spanish doubloons, buried in the sand, contribute to inflame the imagination and avarice of some of the individuals who were active in getting up this expedition.

A naval and land force was organized under Commodore Patterson and Colonel Ross, which proceeded to Baratavia, and with a pompous display of military power entered the bay. The Baratarians at first thought of resisting with all their means, which were considerable. They collected on the beach armed, their cannon were placed in position, and matches were lighted, when, lo! to their amazement and dismay, the stars and stripes became visible through the mist.

Against the power which that banner proclaimed they were unwilling to lift their hands. They then surrendered, a few escaping up the bayou in small boats. Lafitte, conformably to his pledge, on hearing of the expedition, had gone to the German coast—as it is called—above New Orleans. Commodore Patterson seized all the vessels of the Baratarians, and, filling them and his own with rich goods found on the island, returned to New Orleans loaded with spoils. The Baratarians who were captured were ironed and committed to the calaboose. The vessels, money and stores taken in this expedition were claimed as lawful prizes by Commodore Patterson and Colonel Ross. Out of this claim grew a protracted suit, which elicited the foregoing facts, and resulted in establishing the innocence of Lafitte of all other offences but those of privateering, or employing persons to privateer, against the commerce of Spain, under commission from the republic of Columbia, and bringing his prizes to the United States to be disposed of, contrary to the provisions of the neutrality act.

The charge of piracy against Lafitte, or even against the men of the association, of which he was the chief, remains to this day unsupported by a single particle of direct and positive testimony. All that ever was adduced against them, of a circumstantial or inferential character, was a discovery among the goods taken at Baratavia of some jewelry, which was identified as that of a Creole lady, who had sailed from New Orleans seven years before, and was never heard of afterwards.

Considering the many ways in which such property might have fallen into the hands of the Baratarians, it would not be just to rest so serious a charge against them on this single fact. It is not at all improbable—though no facts of that character came to light—that among so many desperate cha-

racters attached to the Baratarian organization, there were not a few who would, if the temptation were presented, "scuttle ship or cut a throat" to advance their ends, increase their gains, or gratify a natural bloodthirstiness.

But such deeds cannot be associated with the name of Jean Lafitte, save in the idle fictions by which the taste of the youth of the country is vitiated, and history outraged and perverted. That he was more of a patriot than a pirate, that he rendered services of immense benefit to his adopted country, and should be held in respect and honor, rather than defamed and calumniated, will, we think, abundantly appear.

TEXAS PUBLIC DEBT.

The following statement of the character and amount of the public debt of Texas, prepared by the comptroller, Hon. James B. Shaw, will be useful for reference at present and for some time to come, while the subject of the adjustment and final settlement of all claims against the late republic of Texas is under consideration. The reader will here see, at a glance, what class of claims is benefitted by the settlement proposed in the late act of Congress. It will be seen that, by this arrangement, one class of creditors will receive \$118,900 less than Texas already offers, while the remainder obtain \$3,433,263 more. A large amount which Texas proposes to pay at par is scaled to 77½ cents by the act of Congress.

STATEMENT of that portion of the debt of the late republic of Texas, which, according to the decision of the Secretary of the Treasury and the opinion of the Attorney General of the United States, is secured by the pledge of impost duties; exhibiting the rate of adjustment established by Texas, and the rate proposed by the recent act of the United States Congress; also, the excess and decrease of each mode of payment compared with the other, and the dividend in the dollar realized by each mode of adjustment. [The interest on the liabilities, issued to bear interest, but on which no interest has been paid, has been calculated from their respective dates of issue up to the 1st of July, 1850, and on those on which interest payments have been made, the interest is calculated to same date, from the last payment of interest. The interest on the first and second issue of Treasury notes is only computed to January 1, 1841, as it is considered, under laws of Texas, that interest ceased to run after that date on these classes of liabilities. Of the 8 and

10 per cent. bonds, entered in the above statement, the State has paid \$298,065 35 principal and interest, which sum, under the recent act of Congress, would be refunded to the State.]

CHARACTER OF CLAIM.

1. 10 per cent. bonds, issued under the funding act of 7th June, 1837.
2. 10 " " " " " " (special.)
3. 10 " " " " " " five million loan acts, for naval vessels.
4. 10 " " " " " " " " loan from U. S. Bank.
5. 10 " " " " " " funding act, 5th February, 1840.
6. 8 " " " " " " " " " "
7. 8 " " treasury bonds " " " "
8. 10 " " treasury notes act of 7th June, 1837, (1st issue.)
9. 10 " " " " " " (2d issue.)
10. Treasury notes (without interest) act of January 19, 1839, (3d issue.)

STATEMENT.

Number.	Total ostensible principal and interest of each class.	Total par value of principal and interest of each class as adjusted under the laws of Texas.	Pro rata amounts proposed by the act of Congress.	Excess of the Texas adjustment over that of the act of Congress.	Excess of the pro rata adjustment over that of Texas.	Dividend in the dollar realized by the Texas adjustment.	Dividend in the dollar realized by the pro rata adjustment.
1	\$1,031,108 80	1,184,779 86	1,253,688 58	.....	117,911 23	0 70	77 27-100 c.
2	27,896 64	27,896 64	21,556 52	.....	6,339 92	1 00	do.
3	1,693,404 70	811,202 85	1,253,689 32	.....	442,486 87	0 50	do.
4	960,498 00	840,000 00	742,310 75	.....	97,789 25	0 87	44-100
5	1,694,400 00	487,890 00	1,255,283 80	.....	767,912 80	0 80	do.
6	46,696 96	18,978 87	86,006 80	.....	93,027 88	0 80	do.
7	1,417,680 00	288,586 00	1,095,491 60	.....	811,955 60	0 20	do.
8	65,000 00	65,000 00	50,327 80	.....	14,772 80	1 00	do.
9	444,000 00	232,000 00	848,094 25	.....	121,094 25	0 50	do.
10	2,199,738 64	549,929 16	1,699,807 78	.....	1,149,875 62	0 25	do.
	10,029,807 60	4,485,688 18	7,750,000 00	.....	118,901 87	8,483,268 19	

NOTE.—The first column of figures, in each table, 1 to 10, shows that the description applies to the corresponding figures.

THE NEW COURT OF CLAIMS AT WASHINGTON.

We publish as valuable to our subscribers in every part of the Union, the following rules adopted by the new court of claims which are to govern in all cases before that tribunal. It will be remembered that this court has original cognizance of all claims against the government which hitherto have been sent up to Congress. The editor of the Review intending to practice in the court, and to have his residence in Washington a large part of each year, feels that he will be doing service to others as well as to himself by inserting these rules:

Rules of practice of the Court of Claims, adopted May 17, 1855.

1. Every claim shall be stated in a printed petition addressed to the court, and signed by the claimant or his counsel.

2. The petition must set forth a full statement of the claim, and of the action thereon in Congress or by any of the departments, if such action has been had, specifying also what person or persons are owners thereof, or interested therein, and when and upon what consideration such person or persons became so interested. If the claim is founded upon any law of Congress, or upon any regulation of an executive department, the act of Congress and the section thereof upon which the claimant relies must be stated, and the particular regulation of the department must be specified. If the claim is founded upon any express contract with the government of the United States, such contract must be set forth in the petition, and, if it be in writing, in the words of the contract. If it be founded upon any implied contract, the circumstances upon which the claimant relies as tending to prove a contract must be specified. There must be annexed to the petition an affidavit of the claimant that the facts stated in the petition are true to the best of his knowledge and belief.

3. Each claim shall be entered on the docket on filing the petition, or, in cases referred by either house of Congress, on filing a petition and the papers in the case referred.

4. The claimant, when he files his petition, shall deliver to the clerk ten copies thereof for the use of the judges and the solicitor.

5. If the solicitor shall be of opinion that the petition does not state a proper case for the action of the court, it shall be his duty, after the filing of the petition, to furnish the clerk ten printed copies of his objections for the judges and the claimant.

6. There shall be no other pleadings than those above stated.

7. If the petition be adjudged to be sufficient, the court will authorize the taking of testimony in the case.

8. The court will appoint permanent commissioners for the taking of testimony, and special commissioners as circumstances may require.

Every permanent commissioner shall take an oath before he enters upon his duties that he will faithfully discharge them so long as his commission remains in force; and every special commissioner shall take an oath faithfully to discharge his duties.

The form of a commission to a permanent commissioner shall be as follows :

COURT OF CLAIMS :

To —, of —, in the county of —, and State of —.
—, Esquire.

You are hereby appointed a commissioner for the State of — to take the testimony of such witnesses as may come before you, to be used in the investigation of such claims as may be presented to this court against the United States. In the performance of this duty you will be guided by the rules of this court, and in making your certificate of the taking of depositions, you will follow the form prescribed by the 15th rule. You will take no deposition unless by the consent of the parties, until it has shown to you, by the return upon the original notice, that the adverse party has been duly notified; and, if he does not appear, you will fix the original notice to your certificate, and return it therewith for the information of the court.

—, Clerk.

When the special commissions are issued, such variations from the above form as may be necessary will be made.

9. The form of a subpoena shall be as follows :

COURT OF CLAIMS :

To —.

You are hereby commanded to appear before —, commissioner appointed by this court to take depositions, on the — day of —, A. D. 185 , at — o'clock in the — noon, then and there to testify in the case of — against the United States, now pending in this court. Fail not of appearance, at your peril. Dated this — day of —, A. D. 185 .

—, Clerk.

10. The party proposing to take depositions shall cause fifteen days' notice thereof to be given to the solicitor or to the claimant or his counsel, as the case may be. The notice must be in writing, and must state the names of the commissioner and of the witnesses and the claimant, and the day of the month, the

hour, and the place of taking the deposition, and must be subscribed by the solicitor or his agent, or by the claimant or his attorney of record. When the claimant proposes to take a deposition, and the witness resides more than five hundred miles from Washington, or where the solicitor proposes to take the deposition, and the witness resides more than five hundred miles from the claimant or his counsel, one day's further notice shall be given for every additional twenty miles.

11. The fees of witnesses for travel and attendance shall be such as are authorized by the laws of the State or Territory where the witness resides, and shall be paid by the party at whose instance the witnesses appear.

12. If the witness, having been duly summoned and his fees tendered him, shall fail or refuse to appear and testify before any commissioner, a rule upon him shall be issued, on motion, to show cause why a fine should not be imposed upon him; and if he fail to show sufficient cause, he shall be fined not exceeding one hundred dollars.

13. All the witnesses shall be sworn or affirmed, before any questions are put to them, to tell the truth, the whole truth, and nothing but the truth, relative to the cause in which they are to testify, and each witness shall then state his name, his occupation, his age, his place of residence for the past year; whether he has any interest, direct or indirect, in the claim which is the subject of inquiry; and whether, and in what degree, he is related to the claimant. At the conclusion of the deposition, the witness shall state whether he knows of any other matter relative to the claim in question; and if he do, he shall state it.

14. All evidence must be in writing, and all depositions must be taken by questions, each of which is to be written down by the commissioner in the body of the deposition, and then proposed by the commissioner to the witness, and the answers thereto are to be written down by the commissioner in the presence of the witness. But the interrogatories and cross-interrogatories may be administered under the supervision of the court, whenever in their opinion justice and expediency require, and each deposition must be signed by the deponent in the presence of the commissioner.

15. The commissioner's return shall be as follows:

State of _____, county of _____, ss:

On this _____ day of _____, A. D. _____, personally came _____, the witness within named, and after having been first sworn to tell the truth, the whole truth, and nothing but the truth, the questions contained in the within deposition were written down by the commissioner, and then proposed by him to the witness, and the answers thereto were written down by the commissioner in the presence of the witness, who then subscribed the deposition in the presence of the commissioner. The deposition of _____, taken at the request of _____, to be used in the investigation of a claim against the United States now pending in the court of claims, in the name of _____ . The adverse party was notified, did attend, and did object.

_____, Commissioner.

Fees of witness, _____.

Travel, _____.

Attendance, _____.

Commissioner's fees, _____.

16. The commissioner shall enclose the commission, depositions, and exhibits, if any, in a packet under his seal, and direct the same to the clerk at Washington, and deposit the packet in the post office.

17. The commissioner shall not be obliged to certify and forward the deposition taken for either party until his fees for the taking of the same and the postage shall have been paid or tendered to him by the party at whose instance the commission issued; which fees shall be five dollars a day, and twenty cents for every hundred words contained in the deposition.

18. No objection to a deposition will be considered as waived because such objection was not taken before the commissioner.

19. No counsel will be permitted to practise in the court unless he is a man of good moral character, and has been admitted or licensed to practise in the Supreme Court of the United States, or in the highest court of the District of Columbia, or in the highest court of some State or Territory, of which admission the certificate of the clerk of such court or such license will be the only evidence; and before admission such counsel shall be sworn to support the Constitution of

the United States, and that his conduct, as counsel, shall be upright and according to law. But any claimant may appear in person and manage his own cause.

20. When the claimant's case is prepared, he shall notify the solicitor thereof, furnishing him at the same time with a printed copy of his brief. The solicitor, within a reasonable time thereafter, shall furnish the opposite counsel with a printed copy of his brief, and file copies of both briefs with the clerk. When the briefs are thus filed, the clerk shall enter the case on the trial docket. At least three days before any case will be called for argument such printed briefs shall be furnished to each of the judges, and contain all the positions and authorities relied on. No *vis à voce* arguments on behalf of either party will be permitted to continue more than two hours, nor will counsel be permitted to take other grounds or to refer to other authorities than those stated in the briefs. The cases will be called for argument or submission in the order in which they shall be thus prepared.

21. In the computation of time mentioned in these rules, all Sundays, and also the day of the service of any notice, and the day on which a party is required to appear, or on which any act is required to be done, shall be excluded.

22. No paper filed in a cause shall be taken from the clerk's office, except by one of the judges, without permission of the court, and by leaving a certified copy with the clerk.

23. If the claimant die, pending the suit, his proper representatives may, on motion, be admitted to prosecute the claim.

A true copy from record :

SAMUEL H. HUNTINGTON, *Chief Clerk.*

RELIGIOUS HISTORY AND STATISTICS OF THE UNITED STATES.*

I. THE PROTESTANT EPISCOPAL CHURCH.—The oldest branch of the Protestant Church in the United States is the Protestant Episcopal. Its history commences with the planting of the colony of Virginia, in the year 1607. For a very long period this church labored under many disadvantages—the difficulty of obtaining ministers from England, where all had to be ordained. Another and very serious difficulty arose from the disputes which occurred in relation to the manner of their support. And, to complete the catalogue of hindrances, at the commencement of the revolution, a large number of the ministers of this body, being Englishmen, felt constrained, by their views of duty, to return to the mother country. It was not till years after the revolution that the real prosperity of this church commenced. From the most authentic accounts which I have been able to find, I think that there were, in the year 1800, 320 churches, 16,000 communicants, 260 ministers, with 7 bishops. In 1819 there were 17 bishops, about 500 churches, and 25,000 members. In 1850, there were 28 bishops, 3 missionary bishops, 1,504 ministers, 1,550 churches, and about 73,000 members. During the first half of this century, the Episcopal church in the United States has, therefore, more than quintupled its clergy and churches, and nearly quintupled its members. The population of the United States has

* By Dr. Baird, author of *Religion in America.*

increased, during the same period, something less than four-fold and a half, it being, relatively, at the epochs of 1850 and 1800, as 439 6-10ths to 100.

II. THE CONGREGATIONAL CHURCHES.—The Congregational branch of the one true Church of Christ may be taken next; for though the Reformed Dutch Church may have had some preachers on the ground before 1620, it is not certain that there were any churches of this body before 1624. The increase of this body has been steady, almost from the first. I have no means of knowing what were its statistics in the year 1800. But in the year 1850 there were 1,971 churches, of which nearly 1,400 were in the six New England States, and the rest in the other States, chiefly Ohio, Illinois, Michigan, Wisconsin, and Iowa. The number of ministers was 1,687, and of the communicants, or members, 197,196. In this statement no churches are included but those which are now called Congregational in America. The Congregational body of churches has not increased as fast as the other great communions, and for the simple reason that it was for nearly two hundred years confined to the six New England States. The emigrants from those States, who had been brought up in the principles of the Congregational system, usually joined the Presbyterian churches in the middle, southern, and western States. This practice still continues, although not so much as formerly. Within the last fifteen or twenty years a large number of Congregational churches has been formed in the States of New York, Ohio, Michigan, Wisconsin, and Iowa, and a few in others, composed for the most part of people from New England. Had the emigrants from New England and their children dispersed over the States and Territories, and who are believed to be almost if not quite as numerous as the actual inhabitants of the land of their origin, all cleaved to its ecclesiastical polity, and every where organized churches on that basis, the Congregational churches in the United States would have been more than 3,000 in number, instead of 1,971, at this day.

III. THE BAPTIST CHURCHES.—The Baptist branch of the church of Christ comes next in order of time.

For a long period, the Baptist ministers encountered much opposition, owing to the intolerance which prevailed both north and south, an intolerance which was a vice of the age. They often suffered imprisonment in Virginia, from the hands of the civil government, and they were banished from Massachusetts, and compelled to found the colony of Rhode Island. At length, however, better views prevailed in both portions of the country. In Pennsylvania and New Jersey

they never experienced opposition, so far as I know. In the year 1791, there were 1,150 churches, 891 ministers, and 65,345 members. In 1850, what are called the "Regular," or "Associated Baptist churches were believed to be 10,441, the number of ordained ministers 6,049, and that of the members 754,652. If we add to these the Seventh-day Baptists, (Sabbatarians,) with their 60 churches, 46 ministers, and 7,000 members; the Free-will Baptists (who are Arminian in their theological views,) 1,154 churches, 823 ordained ministers, 49,215 members; the Six Principal Baptists, and one or two other small branches, who have about 200 churches, 100 ministers, and 11,000 members; and the "Disciples of Christ," or "Reformers," as they call themselves, a large body, embracing, in 1850, about 1,600 churches, 1,000 ministers, and 127 000 members, who have adopted the sentiments of the Rev. Dr. Alexander Campbell, which have been considered too speculative and cold, and not sufficiently operative to the renovation of the heart and life,* we shall have an aggregate of 13,455 churches, 8,018 ministers, and 948,867 members. This is an immense increase since the year 1791—sixty years ago. In the year 1750, one hundred years ago, there were only 58 Baptist churches in the whole of what is now the United States; and in the year 1768, there were but 137. It appears that in sixty years the Baptist churches have increased tenfold, their ministers ninefold, and their members more than thirteenfold!

IV. THE PRESBYTERIAN CHURCHES.—The next of the large Christian bodies which arose in the United States was the Presbyterian. The first ministers of that body were from Scotland and the North of Ireland, and were joined by ministers from New England, who came into the middle and southern States, where Presbyterianism first gained a foothold. In the year 1705 a presbytery, consisting of seven ministers, was formed; from this beginning the body has steadily grown, until it now ranks among the most numerous and powerful of the land. In the year 1800, it is believed, the number of ministers of what is now called the Presbyterian church, was about 300, churches 500, and communicants 40,000. This is, at all events, as exact as we can make the statement, and it cannot be far from the truth. The two

*I am happy to say that from various quarters I have received information, that spiritual life is increasing in this branch of the Baptist body. This is indeed a cheering fact, one that, perhaps, should have been expected. Dr. Campbell thought he saw the truth exposed to danger from a certain quarter, and it was quite possible for him, in these circumstances, to go to the other extreme. But it was natural for a proper equilibrium, or something like it, to be reached in due time.

great branches in which it now appears, for a division took place in the year 1838, stand thus: The Old School General Assembly has 23 synods, 134 presbyteries, 2,027 ministers, 618 licentiates and students, 2,675 churches, 210,306 members. The New School Assembly has 21 synods, 104 presbyteries, 1,489 ministers, 204 students (in theological schools only) and licentiates, 1,579 churches, and 140,060 communicants. Taken together, the two branches of the Presbyterian church name 44 synods, 238 presbyteries, 3,516 ministers, 822 licentiates and students, 4,254 churches, and 350,366 communicants. From this it appears that this body increased nearly twelvefold so far as the ministry is concerned, eight and a half fold as to the churches, and nearly ninefold as regards the members. But, if we add the smaller branches, none of which amounted to much in the year 1800, and the largest of which did not exist at all, the increase of the Presbyterian body becomes still more striking. They are as follows: 1. The Associate Presbyterian church, which had in 1850, 1 synod, 16 presbyteries, 120 ministers, 214 churches, and 18,000 communicants. 2. The Associate Reformed Presbyterian church, with 4 synods, 20 presbyteries, 219 ministers, 332 churches, and 26,340 members. 3. The Reformed Presbyterian church, with 2 synods, 7 presbyteries, about 80 ordained ministers, 100 organized churches, and 12,000 communicants. These three bodies have at least 160 students and licentiates. 4. Reformed Dutch church, which is only Dutch in name at present, for the English is used in all their pulpits, and spoken by all their people. This body had, in 1784, only 82 churches, and 30 ministers. In 1850 it had a general synod, 2 particular synods, 24 classes (or presbyteries,) 293 ministers, 292 churches, and 33,553 communicants. It had also 32 students in theology. 5. The Cumberland Presbyterian church. This body arose in 1810, in the State of Kentucky. In polity it is Presbyterian, with the addition of the itinerating system of the Methodist church. In doctrine it holds a sort of medium ground between Calvinism and Arminianism.* It has a General Assembly, 12 synods, 45 presbyteries, 350 ministers, 480 churches, and more than 50,000 members. This body is most numerous in the south-western and western States. It has but few churches eastward of the Alleghany mountains.

From this it appears the Presbyterian family of churches, speaking the English language and having a British origin, except the Dutch Reformed, consists of 4 general assemblies,

* It is rather a mixture than a medium, for whilst they reject the doctrine of *Election*, they hold to that of the *Perseverance of the Saints*.

65 synods, 360 presbyteries, 4,578 ministers, 1,014 students and licentiates, 5,672 churches, and 490,259 communicants. And almost all this is the growth of fifty years, or the era from 1800 to 1850. During that period the Presbyterian Church may be said to have increased nearly elevenfold.

V. THE METHODIST CHURCHES.—The last in order of time, of the larger religious bodies mainly of Anglo-American origin, that arose in the United States was the Methodist Episcopal Church. It was not till the year 1784 that this church was organized—under the superintendence of the Rev. Messrs. Coke and Asbury. Up to that time, those who followed the doctrines and measures of Wesley remained in connexion with the Protestant Episcopal Church. At the date of its organization the new body had 83 ministers and 14,986 members. In the year 1800 it had 40,000 members. Its subsequent increase has been immense. It now spreads over all the country, and its “conferences,” “districts,” and “circuits,” cover the whole land. Its itinerating system is admirably adapted to the extent and wants of so vast and so new a field. In the year 1844, a division took place in this body, occasioned by the subject of slavery. In the year 1850, the northern branch, called the “Methodist Episcopal Church,” had 4,004 ministers on its regular service, and 666,310 members. The “Methodist Episcopal Church South,” had 1,642 ministers, and 504,520 members; making in all, 5,646 regular ministers, or those on the circuit, besides a large number of local ministers, and 1,170,830 members. There are several small Methodist bodies. 1. In the year 1828 there was a secession from the Methodist Episcopal Church, on account mainly of the exclusion of the lay representatives from the annual and general conferences; and the Protestant Methodist Church was organized. This body had in 1850 a general conference, 22 annual conferences, 1,200 travelling and local preachers, and 62,000 communicants. 2. There is what is called the Wesleyan Methodist Church, which was another secession, on the ground of slavery and the episcopacy, in the year 1842. It has several conferences, and 20,000 members. 3. There are some Primitive Methodists in America, but their societies are neither large nor numerous. 4. There is a small Christian body of colored people, called the African Methodist Church, which has about 20 circuits, 30 preachers, and nearly 3,000 members. And, 5. There are some 20 congregations of Welsh Calvinistic Methodists. By combining all the churches above mentioned, it will be found that there are quite 6,000 regular preachers, at least 8,000 local preachers, and more than a million and a quarter of mem-

bers! There is reason to believe that the membership of this communion has increased much more than six times as fast as the population of the country has done since the year 1784!

VI. THE GERMAN CHURCHES.—We come now to a group of churches of continental origin, and which still employ more or less the German language. Hitherto we have been speaking of churches which have been founded by emigrants from the British Isles, and which speak the English language, and employ it, with few exceptions, in their public services. These exceptions are some Welsh churches—probably not short of a hundred in all—which are mostly Congregational, Methodist, or Presbyterian; a few Gaelic churches, that are Presbyterian; some Swedish and Norwegian churches, chiefly Lutheran; and some German churches, which belong to the Methodist, Presbyterian, Dutch Reformed, Baptist, &c. Whilst all the earlier emigrants from other parts of the continent—such as the Dutch, the Huguenots, the Waldenses, the Swedes, &c.—have long since lost their languages and become merged in the Anglo-American population, those from Germany being much more numerous, and constantly sustained in the use of their maternal tongue by the never-ceasing flow of the immigration from Germany, have retained, in many places, their old language, and employ it in their religious services. 1. The largest of these bodies is the Lutheran, which, in 1850, consisted of a general synod, 19 district synods, 663 ministers, 1,603 congregations, and 163,000 members. The increase of this church since the year 1800 has been very great, but I have no means of measuring it in a statistical manner. Not only has its numbers greatly augmented, but there has been a great resuscitation of true piety and spiritual life. 2. The next German communion, in point of size and influence, is the German Reformed Church. This body, like the Lutheran, has received great enlargement in the United States within the present century, though both existed long before in portions of Pennsylvania, Maryland, and Virginia. It had last year about 260 ministers, 600 congregations, and 70,000 communicants. This body has been troubled of late years by some speculations, which have been pronounced to be kindred to those of Dr. Pusey, but it contains many excellent men, and is rapidly increasing in numbers. 3. The United Brethren in Christ. This denomination arose in the latter part of the last century, from the union of some excellent people who had belonged to the Reformed, Lutheran, and Mennonist Churches. Their first conference was held in the year 1800.

They had last year nine annual conferences, 4 bishops, or superintendents, 250 itinerant ministers, 350 local preachers, 1,800 churches and other places of worship, and about 67,000 communicants. Their doctrines and modes of worship are essentially the same as those of the Methodist Episcopal Church. 4. The Evangelical Association, founded in 1800. This is another sect of German Methodist, and is similar to the Methodist Episcopal Church in doctrine and church polity. It has 2 bishops, a general conference, 4 annual conferences, 112 travelling ministers, 200 local preachers, about 900 places of preaching, and 17,000 communicants. 5. The United Brethren, or "Moravian Brethren," as they are often called. They have several settlements, chiefly in Pennsylvania, 1 bishop, 23 churches, 27 ministers, and 3,000 communicants. 6. The Evangelical Church, of quite recent origin, an offshoot of the Evangelical Church of Germany. They have a synod of some 25 or 30 churches in Missouri, and are increasing. 7. The Mennonists, a small body, who are often classed with the Baptists; but they rather pour than either sprinkle or immerse. The worship chiefly in private houses, and their congregations, estimated at 400, are small. They have about 240 ministers. They can hardly have more than 30,000 communicants. 8. The Tunkers or Dunkers. A small sect of German Baptists that appeared in America more than 130 years ago. They retain some customs which are quite oriental and primitive, such as washing the feet and giving the kiss of charity. But little is known of their numbers, as they publish no statistics. It is believed that they have as many as 250 preachers, and 8,000 or 10,000 members. They are generally farmers, and are most numerous in Pennsylvania and Virginia. They have lately had a great religious meeting in the latter, to which they came in great numbers and from afar in their wagons. They are simple-hearted, industrious, quiet, worthy people. 9. The Winebrennerians, a growing sect in Pennsylvania chiefly, of good people, founded by Mr. Winebrenner, of Harrisburg, in that State; I know not their numbers. 10, and lastly, there is a small German, Seventh-day Baptist Church, much attached to monastic life, but of their statistics I have nothing that can be depended on. They are not believed to exceed a few hundred in number, and their ministers may be as many as ten or twelve. It appears from this statement that there are no less than ten German branches of the Protestant Church in America, almost all of them offshoots of German bodies in Europe, and that they have about 1,827 regular ministers,

550 local preachers, 5,356 congregations, many of which are very small, and 333,000 members.

VII. THE FRIENDS.—It only remains that I speak of the Society of Friends, whose “meetings,” or congregations, are estimated at about 500, of which 300 are supposed to be orthodox, and 200 “Hicksite,” from one Elias Hicks, who was a celebrated preacher in that body some twenty years since, and taught doctrines of a very deistical character, which, in process of time, led to a complete disruption of the body. Whilst it is not doubted that there are many excellent and truly pious people in the orthodox portion of this denomination, it is thought that the society is not increasing, at least, not perceptibly. Many of the Hicksite branch, especially of the young people are falling into infidelity, in which some will probably continue to wander; whilst many, it is believed, will ultimately be merged in the other Protestant churches.

SUMMARY.—The result of all the investigation which we have been able to bestow on the subject is, that there were last year in the United States, in the several branches of the Protestant Church, which may be termed Evangelical—first, 23,614 ministers (besides the “local preachers” of the several branches of the Methodist Churches, who are not less than 9,000 in number;) second, 58,304 congregations, or assemblies; third, 3,292,322 communicants. Given in a condensed tabular view they stand thus:—

Denominations.	Ministers.	Congregations.	Members of churches.
Protestant Episcopal church.....	1,504	1,550	73,000
Congregational body.....	1,687	1,971	197,196
Baptist body.....	8,018	13,455	948,867
Presbyterian body.....	4,578	5,672	490,259
Methodist body.....	6,000	30,000	1,250,000
German churches.....	1,827	5,356	333,000
Friends or Quakers.....	.....	300	.....
Total.....	23,614	58,304	3,292,322

It is very difficult to ascertain the exact number of those who are preaching the Gospel. We have given the number reported, on the best authority that we can find in each religious body. And although it is certain that a considerable deduction should be made from the numbers given, for superannuated ministers, professors and teachers, missionaries, &c., yet all this is far more than made up in the great number of licenciates, or young ministers, who are not settled,

many not having finished their theological studies—of whom there are not less than two or three thousand. Besides all this, there are at least 9,000 local preachers in the several Methodist Churches, all of whom do less or more in the way of preaching and holding meetings for prayer, conducting Bible classes, superintending Sabbath-schools, &c., &c., as well as various forms of pastoral labor. This would make the number of Evangelical preachers more than 32,000.

There has been no portion of this investigation attended with more difficulty than that relating to the number of individual churches. I have found it impossible to attain entire accuracy. The number given is rather that of the congregations or assemblies. Large as it is, it is certainly much under the mark. The several branches of the Methodist church, and also the Cumberland Presbyterians, have their circuits, each comprehending, for the most part, several places for worship. They may be church edifices, school-houses, court-houses, or private houses. If all the places where the Gospel is occasionally preached by pastors and others, but where there is no church organized, because not necessary, were to be added to those in which a church or body of believers is organized, the entire number of places where the gospel is preached would, it is believed, be found to exceed one hundred thousand!

There are various ways of measuring the progress of religion in a country. One of these is statistical, and this we may legitimately apply, at this point, to the country of which we are speaking. It is impossible to ascertain with entire precision the number of Evangelical ministers, churches, and communicants in the United States at the epoch of the Revolution, seventy-five years ago.* We cannot ascertain the number for the year 1800 with strict accuracy; but we can ascer-

* In another work—RELIGION IN AMERICA, (Book III. chap. 1.)—I have stated that, after much inquiry, I had come to the conclusion that there were in the year 1775, fourteen hundred and forty-one ministers, and nineteen hundred and forty churches, in the United States. This statement included twenty-six Roman Catholic priests and fifty-two churches. According to this estimation, there was one minister, on an average, for about 2,429 souls—supposing the population of the country to have been 3,500,000 at that epoch, which is probably not far from the truth.

If we suppose the number of ministers of the Evangelical churches alone to have been 23,614 in the year 1850, and the population 23,250,000, then we shall find that there was one minister for 984 individuals! Making all proper allowance for the increase of ministers and churches from 1775 to 1800—and that increase was not very great, in fact the number of Episcopal ministers was less in the south in the latter of these epochs than of the former—we come to the conclusion that the number of ministers of the Evangelical churches alone, and of the churches and members too, we doubt not, was twice as great in proportion to the population in 1850 as it was in 1800. If we include the NON-EVANGELICAL bodies, this increase becomes still more astonishing.

tain enough, and I have already given the data, to show, that while the population of the United States increased something less than fourfold and a half, from 1800 to 1850, the number of Evangelical ministers of the Gospel, churches, and members of the churches, has increased nearly, if not quite, tenfold! As to other modes of measuring the advance of the truth in the United States I shall speak of them presently.

VIII. THE SWEDENBORGIANS.—Of this well known sect there are about 40 small churches, 35 ministers, and 10,000 people.

IX. THE UNITARIANS, chiefly in New England. They count about 300 churches, 250 ministers, and 30,000 members.

X. THE CHRISTIANS, or *Christians*, as they are commonly called. They were at the outset a warm-hearted, zealous, rather fanatical sect, which arose at various points almost simultaneously, some forty years ago and more. These deny the Trinity, but hold to salvation by Christ, “by whose sufferings, death, and resurrection,” they say, “a way has been provided by which sinners may obtain salvation.” They report 1,500 churches, as many ministers, and 150,000 members.

XI. There are some German Lutheran churches in Eastern Pennsylvania, and in other parts, that are Socinian, but I have not been able to ascertain their number. A portion of the Friends, or Quakers, must be placed in this same category.

XII. THE UNIVERSALISTS.—This is a sect of English origin. Its first apostles and propagators were Murray and Winchester. They were serious men, and held the doctrine of Restoration. At present there are very few among them who believe in any future punishment. They have 540 preachers, 550 churches, and 875 societies.

XIII. THE ROMAN CATHOLICS.—This body had, in 1850, 4 archbishops, 30 bishops, 1,073 churches, 1,081 priests, and a population of 1,500,000; according to the Roman Catholic Almanac.

*Church Value and Accommodation for the several great Sections.**

Geographical divisions.	Churches.	Church Prop-erty.	Average value.	Accommoda-tion for persons.	Average ac-commodation for persons.	Ratio of accom-modation.	Total popula-tion.
New England	4,619	\$19,363,534	\$4,198	1,895,285	411	69.47	2,796,116
Middle States	9,714	41,187,637	4,235	4,806,453	443	65.00	3,624,933
Southern States	7,394	7,373,634	997	2,571,412	348	65.08	3,959,337
Southwestern States	5,415	5,189,074	957	1,596,750	295	48.08	3,321,117
Northwestern States	10,928	18,809,123	1,723	3,853,926	353	60.41	6,379,933
California & Territories.	122	430,320	4,019	46,233	379	23.03	184,595

* From Compendium of United States Census, 1850.

THE COUNTIES OF THE UNITED STATES.

States and Territories.	Counties.	Unchanged between 1840 and 1880.	In which females greatly preponderate.	In which no free col.	In which no slaves.	In which slaves preponderate.	In which native & foreign are nearly equal.	In which foreigners greatly preponderate.	Containing few or no foreigners.	Counties having the largest per cent. of foreign born.
Alabama	52	45	5	15	17	Mobile, 27.05.				
Arkansas	51	28	9	2	37	Pulaski, 7.42.				
California	37	1	9	27	6	Tuolumne, 50.77.				
Columbia, Dist. of	1	1	1	1	1	Washington, 10.25.				
Connecticut	8	8	6	8	1	New Haven, 14.48; Hartford, 14.40.				
Delaware	3	3	1	1	1	New Castle, 11.87.				
Florida	28	12	5	4	18	Munroe, 48.87.				
Georgia	25	89	14	9	46	Chatham, 28.08.				
Illinois	99	70	8	99	3	Cook, 50.39.				
Indiana	91	85	8	91	1	Vandenburg, 35.56.				
Iowa	49	17	25	1	14	Dubuque, 89.67.				
Kentucky	100	74	1	1	39	Jefferson, 89.26.				
Louisiana	47	26	5	29	4	Orleans, 50.52.				
Maine	18	18	3	13	1	Washington, 19.84.				
Maryland	20	20	1	2	5	Baltimore, 19.87.				
Massachusetts	14	14	6	14	1	Suffolk, 34.24.				
Michigan	48	28	9	48	1	Wayne, 33.93.				
Mississippi	59	56	9	90	21	Harrison, 30.89.				
Missouri	100	60	23	1	43	St. Louis, 58.50.				
New Hampshire	10	7	4	10	1	Cheshire, 7.77.				
New Jersey	20	16	2	7	1	Hudson, 26.01.				
New York	52	54	4	59	3	New York, 46.74.				
North Carolina	79	57	1	8	50	Cumberland, 9.76.				
Ohio	87	57	2	87	1	Hamilton, 41.74.				
Pennsylvania	68	40	1	68	1	Allegheny, 81.89; Philadelphia, 23.84.				
Rhode Island	5	5	3	5	1	Providence, 21.11.				
South Carolina	29	29	4	15	4	Charleston, 30.48.				
Tennessee	79	54	1	1	43	Shelby, 9.70.				
Texas	80	*88	46	4	28	Medina, 70.60.				
Vermont	14	14	14	14	1	Chittenden, 23.16.				
Virginia	137	101	3	5	60	Preston, 23.62; Ohio, 22.50.				
Wisconsin	31	17	4	31	6	Manitowoc, 64.72; Wash- ington, 62.90.				
Territories										
Minnesota	9	4	9	1	1	Pembina, 64.29.				
New Mexico	7	7	7	7	2	Valencia, 9.51.				
Oregon	10	7	10	8	8	Clark, 45.05.				
Utah	7	4	6	6	1	Salt Lake, 21.12.				
Total	1,626	1,146	54	192	608	155	20	7	441	

* Existing prior to the annexation, December 29, 1845.

OUR SOUTHERN TORMENTOR—THE MOSQUITO.*

Ubi tot sensus collocavit ut in Culice.—*Plin. Hist. Nat.*

An opinion, as common as it is pernicious and vulgar, has prevailed against the propriety of undertaking researches, the utility of which cannot be immediately and directly appreciated. *Cui bono?* This question is, in the first stage of investigation and discovery, both improper and prejudicial, being apt to bias the inquirer and impede, if not prevent, his progress. "To discover, not to apply," is the first step—its

* By Dr. B. Dowler, of New Orleans, Editor of Medical and Surgical Journal.

applications the last, easiest, and least meritorious. Franklin's sublime discovery of the identity of lightning and electricity, by means of a kite, made the application of the conducting rod an easy affair, whereby life and property might be protected.

Discovery has, in perhaps every instance, been precluded by innumerable antecedents calculated to develop the truth, or at least to prepare the mind for its final reception and appreciation.

"I could never have fully comprehended," says Goethe, "how paltry men are, and how little they care for high aims, if I had not had such opportunities to test them in the course of my scientific researches. Now I saw that most men only care for science in so far as they get a living by it, and that they are ready to worship any error which they may find profitable."

Byron, it may be hoped, spoke in an ironical vein when he said that "cash is virtue." But the great reformer, Bentham, maintains with all possible gravity, throughout many pondrous octavos, that utility and virtue are identical.

The mosquito is not a mere thing of *virtu*. It is an encyclopædia of anatomy, microscopy, physiology, and natural history, presenting a series of problems, the solution of which would place the science of organism, function, and vitalism upon a lofty eminence which they have never yet reached, and perhaps, never may. Were the physiology of the mosquito, its alimentation, assimilation, circulation, respiration, secretion, excretion, muscular motion, sensation, generation, development, life, and death, all known and determined, the existing enigmas of human physiology would be almost entirely solved. A thorough knowledge of a single species will serve as a key to the whole animal kingdom.

In some of the States of the Union, by a wise legislation, the natural history of insects has been prosecuted by authority and paid for by the treasury—particularly in reference to the natural history of insects injurious to the public, and the vegetable kingdom: such as Dr. Harris' Treatise (8vo. pp. 459, Boston, 1841,) on some of the insects of New England. Entomological Societies in several States have been formed; and courses of lectures are annually delivered in some of the colleges upon the natural history of insects. But in Louisiana, where insects abound, where some thousands of new ones may doubtlessly be discovered, and where the crops suffer most from them, entomology has scarcely been dreamt of in her philosophy, either as a question of economy or natural history. An accurate knowledge of the cotton-destroying

insect is the most likely means of discovering the method of preventing or restricting its destructive march. He who shall write a good history of a Louisiana bug, may expect an immortality that will not be conceded, perhaps, to a single politician of this day.

All I propose, on this occasion, is to offer a few desultory remarks on the mosquito, not a scientific treatise; and, as it is not deemed polite to look a gift-horse in the mouth in order to know his age or value, so I trust that this *con amore* attempt in the right direction will somewhat disarm criticism, and, perhaps, induce others, better qualified than the writer, to give the public their scientific observations upon the natural history of this insect, and upon the material conditions which tend to circumscribe its extension, as the clearing, drainage, and cultivation of the land—the plants, waters, and localities in which it multiplies, and seeks nutrition by its suctorial operations.

The mosquito is, in fact, a historical animal and not without reputation. Linnæus, flattering philosopher! puts man at the head of the creation, baptizing him with the specific name, SAPIENS! Were a mosquito to write a history of its race and the rôle it has performed in the distinguished transactions in the drama of humanity, it might relate how its powerful tribe compelled Sapor, king of Persia, to raise the siege of Nesibis by attacking his mighty elephants, his beasts of burden, and his serried columns of soldiers—how it dispersed the mighty army of the Emperor Julian; it might quote from Mouffet, author of *Theatrum Insectorum*, showing that the mosquito race had attacked and depopulated several ancient cities. It might dwell with pride on its civil and geographical honors—honors greater than Columbus himself has obtained. Witness mosquito bayous, and bays; and mosquito kingdom, large, fertile and salubrious. “Honors, greater than Ilion to her hero paid.” A foreign writer says that the American mosquitos attacked General Washington, piercing his leathern boots, and that they are equally potent on the river Po, in Italy. Mr. Bryant has poetized the mosquitos of New York, as all know.

Mosquito Bar.—The Greek word conopeion—whence the Latin conopeum, is thus defined by Schrevelius: “*velamen ad culeces arcendos*”—a veil to exclude gnats or mosquitos. Indeed, the best lexicographers translate the Greek word conopeion by the term mosquito-net—consinière (Fr.) mosquitero (Sp.) námooseh (Arab.) The Greek word canops, culex (Lat.) gnat or mosquito, is doubtlessly the radical word

whence the Greek conopeion, the Latin conopeum, or as Horace has it, conopium. Hence the English word canopy.

Herodotus, (born 484 B. C.,) whom Cicero calls the father of history—"historice patrem," gives an account of the mosquito and mosquito-nets of ancient Egypt, full of instruction, though in some particulars erroneous. "The Egyptians," says he, "are provided with a remedy against gnats or mosquitos—each has a net with which he fishes by day, and which he renders useful by night. The Egyptians cover their beds with their nets and sleep securely beneath them. If they were to sleep in their common under garments, the gnats would not fail to torment them." (ii. 95.) Although this passage may be open to criticism, it indicates the Egyptian origin of the mosquito-net. A net so open in texture (and consequently open to criticism) as to permit the turbid waters of the Nile to traverse its meshes freely, would scarcely be an effectual mosquito-bar, unless we suppose that the Pharaonic mosquitos were of colossal size. Such a supposition is untenable, inasmuch as the mummies of many sacred animals, including some insects, fully attest that no individual variations in the animal kingdom have taken place for thousands of years.

Mr. Lane, in his work on modern Egypt, says, that "the mosquitos are troublesome at night unless a curtain be made to keep them away. A mosquito curtain—*námooseeyeh*, (from *namóos*, a mosquito,) is composed of muslin or linen of an open texture, and is suspended by means of four strings, which are attached to nails in the wall." (i. 4,228.)

Having noticed what Herodotus has said in relation to the mosquito-bar, which he represents as having been used only in the marshy regions of the Nilotic valley, it may be proper to add his account of the mosquitoes themselves. He says that, "Egypt contains a surprising number of these insects. As the wind will not suffer them to rise far from the ground, the inhabitants of the higher part of the country usually sleep in turrets." In the days of the Pharaos, mosquitoes were least troublesome in elevated situations. It is so still. Egypt is probably more infested now by these insects than in ancient times, when the population was vastly greater, and the soil better cultivated. At present, as night approaches, these insects swarm forth from depressed grounds, rice-fields, marshy places—in the shades and ruins of the colossal Memnon, the dilapidated Sphinx, the mouldering Luqsor, Karnac, Denedra—the time-defying Pyramids, and the desecrated tombs of the Pharaos.

Although, among the ancient Romans, the term *culex* may

have been often applied, as the word gnat is among the moderns, to designate the whole family of gnats, yet there can be little doubt that from the earliest times this word was specially intended to indicate the mosquito, which then infested, as it still does, the marshy districts of Italy. Horace, nearly two thousand years ago, having experienced the pain-giving, blood-sucking, and sleep-averting operations of this insect, pronounced against it his malediction :

Mali Culices * * *
Avertunt Somnos.

At the commencement of last century naturalists did not appear to have been acquainted with 10,000 species of animals; now they know nearly ten times this number of insects alone; the beetles or coleopterans amount to 2,000 or 3,000, while the known animals amount to a quarter, and counting the fossil, to half a million of species and varieties.

If we except the great Aristotle, the ancients made but little progress in natural history. With the revival of letters, and the discovery of the art of printing, comparative anatomy and physiology began steadily to advance. The fundamental principles of philosophical zoology eliminated from organization, from typical forms, from function, from affinity or homology, and from analogy, prepared the way for a natural classification of animals, living and extinct—a classification not based on words alone, but on things. In pursuance of this method, the late St. Hilaire deduced from even monstrosity itself laws classific—regularity from irregularity—unity from a seeming confusion.

Culicidæ. Nomenclature.—The hexapod insects (that is, not having more than six legs) Linnæus divided into seven orders—the sixth being called the diptera or two-winged, as the housefly and mosquito.

Entomologists of the present day usually apply the word *culex* to designate a genus of the family *culicidæ*—a family belonging to a great primary division of the animal kingdom, namely, the *Articulata*, which is characterized by a cutaneous skeleton—sometimes calcareous; sometimes horny; sometimes membraneous; consisting of a series of segments and rings, (in insects never exceeding twelve,) joined together in multitudinous forms without essentially deviating from a common type. This compensating external skeleton, like the ordinary internal one of the vertebrated animals, serves as the framework for the muscular apparatus, while it encloses and protects many vital organs.

This firm integumentary envelope, once regarded as identical with horn, is due to a peculiar substance which organic chemists have named *Chitine*.

Of all the *Diptera* or two-winged insects, the gnat family seems to have been the least accurately studied or classified, as may be judged from the fact that its species have been so variously reckoned, as two—three—five—six—fourteen—twenty-eight; a strong contrast to the classificatory precision, real or apparent, in systems of entomology. For example, the *coleopterous*, or four-winged, hard-shelled insects, although exceeding twenty thousand, perhaps reaching twenty-five thousand known species, appear to be better understood than the small tribe of the *culicidæ*.

Of the genus to which the mosquito belongs, the latter is doubtlessly the best type with regard to anatomical and physiological characteristics and developmental transformations, from ova to larvæ—from larvæ to nymphæ—from nymphæ to perfect insects—all of these interesting topics, as well as inquiry into many other observed episodes illustrative of mosquito life, must be omitted at present.

Geographical distribution and climatical range of Mosquitoes.—"All the insects," says Latreille, "brought from the eastern parts of Asia and China, whatever be their latitude and temperature, are distinct from those of Europe and Africa." Mr. Lyell says the insects of the United States, although often approaching very close to our own, are, with very few exceptions, specifically distinguishable by some characters. In South America the equinoxial lands of New Granada and Peru on one side, and of Guiana on the other, contain, for the most part, distinct groups; the Andes forming the division, and interposing a narrow line of severe cold between climates otherwise very similar. (*Géographie Générale des Insectes et des Arachnides. Mém. du Mus. d'His. Nat. t. iii.*)

The mosquito of all climates appears to possess the same essential characteristics. The same is true to a great extent of the honey-bee, (*apis mellifica*,) though it flourishes almost exclusively in proximity with civilized man, having been imported into America, it is the harbinger of the advance of civilization, occupying a zone near the settlements. The mosquito, on the contrary, is a native of and flourishes best in a wilderness where moisture abounds.

There is probably no insect or animal so diffused, and so unrestricted as to latitude, as the mosquito. Many writers have grossly erred in assigning its special *habitat* to southern lands; Crabbe says "the mosquito is a kind of gnat in *warm climates*." Baron Humboldt says that mosquitoes are not so general in the Torrid Zone as many believe. On the table lands, remote, from the beds of great rivers, there are not

more gnats than in the most populous parts of Europe. Captain Cook says that he found none of these insects at Terra del Fuego, which, he adds, "is perhaps more than can be said of any other uncleared country," while "in New South Wales clouds of mosquitoes sting incessantly."

Louisiana is less infested with mosquitoes than many districts of the torrid and frigid zones. In his travels in the equinoctial regions of America, Baron Humboldt gives some statements, which, coming from almost any other traveller, would scarcely be credited. * * * He mentions certain localities, where, in order to avoid the mosquitoes "the inhabitants have to bury themselves from 3 to 4 inches deep in the sand, their heads only being out, which they cover with a handkerchief." In the missions of the Orinoco there is a large species of gnat, the *zancudo* which is very troublesome by night, while the mosquito is only bad in the day: When two persons meet in the morning, the first questions they address to each other are—"How did you find the *zancudo* during the night? How are we to-day for mosquitoes?"

Mosquitoes of the Arctic or Frozen Zone.—Humanity may hope for comparative, not absolute happiness. If, as a French philosopher contends, there is always something in the misfortunes of others not displeasing to ourselves—if contentment can be derived from the assurance that others are far more miserable than we are—if it can be shown that the paradise of the mosquito is not in the region of eternal summer, but in the glacial zone, whose icy peaks shimmer in no light but that of the stars and the auroral coruscations during several months of the year, then surely the children of the sun should be reconciled to their lot—to their cotton, coffee, sugar, figs, oranges, palms, bananas, and a moderate proportion of mosquitoes which buzz in their Eden, where, in many places, two or three crops of cereal grains may be gathered every year from an exuberant soil.

A few reliable authorities will sufficiently show the prevalence of mosquitoes in the arctic regions; among them is Captain Franklin—the late Sir John Franklin—the long-lost voyager, who, in his voyages in the Polar Seas, in 1825-'6, gives the most deplorable accounts of the annoyances which the expedition suffered from mosquitoes; they abounded, says he, at the mouth of the McKenzie river under 69° N. lat., at the low temperature of 45° Fah., (only 13° above freezing.) "On the 24th of May they appeared at Fort Franklin, 65° 11' 56" N. lat. At first they were somewhat feeble, but a few days after they became vigorous and tormenting."

"July 22d, in 69° 36' N. lat., tormented with mosquitoes."

On reaching a still more northern latitude he says, "the mosquitoes were so numerous as to prevent any enjoyment in the open air, and to keep us confined to a tent filled with smoke, the only remedy; they assailed us as soon as the temperature reached 45° Fah. Myriads which reposed among the grass rose in clouds when disturbed and gave us much annoyance."

Capt. Back, R. N., in 1833, when at Fort Reliance, Slave Lake, complained bitterly of the mosquitoes. Let us glance first at the climate of this same fort. Capt. Back says that in December and January, 1833-'4, the mercury fell 102° below the freezing point—sextant cases, boxes of seasoned wood and so forth all split—the skin of the hands became dry, cracked and opened into unsightly and smarting gashes. Nitric ether became viscid, rum thick, mercury solid. He had, of course, to use the spirit thermometer. It is evident that no degree of cold yet ascertained can kill mosquitoes.

The dismal picture drawn in this high latitude of the glacial zone, of the sufferings of Capt. Back and party from the mosquitoes and sand flies, has no parallel in the torrid zone. "How," says he "can I give an idea of the torments we endured from these insects? They rose in clouds actually darkening the air; to see or speak was equally difficult, for they rushed at every undefended part—our faces streamed with blood—inflammation and giddiness almost drove us mad—even the Indians threw themselves on their faces and moaned with pain and agony. The men were unable to work without the protection of clouds of smoke." After travelling north from Fort Reliance in the month of June, at 40°, "the mosquitoes were quite lively."

Capt. Ross, R. N., in his second voyage, complains in the most piteous manner:—"the mosquitoes were more virulent than in the West Indies, rendering every moment a torment so as to occupy the entire attention, making it almost impossible to act or enjoy." While his ship, the *Victory*, was enclosed by innumerable icebergs from which she never was extricated, "the mercury descending to 40°—the mosquitoes swarmed in the vessel, and were as troublesome as in the West Indies."

In the *British and Foreign Medico-Chirurgical Review* for October, 1852, is the following statement founded on Dr. Magnus Huss' able work on the endemic diseases of Sweden, published in 1852, at Stockholm.

"In the northern parts of Sweden and Norway, among the Lapp population of these wild regions, conjunctivitis and snow blindness prevails—hardly one of the Lapps escape

from the consequences of living throughout the winter in close huts, surrounded with a dense atmosphere of smoke, and of exposure to the glare of the sun on the trackless snow-fields in spring. During the winter, the only artificial light used by the Lapp is obtained from resinous pine-branches, which, of course, add much to the density of the acrid smoke with which their huts are constantly filled. In summer, the smoke is imperatively called for to drive off the swarms of mosquitoes and gnats, which are then scarcely less troublesome than in the tropical regions."

Malte-Brun, the celebrated geographer, asserts that "the mosquito which torments the traveller upon the banks of the Oronoco resembles that which buzzes in Lapland," and he might have added in Iceland, Lower Hungary, and innumerable other places. At the bases of Greenland's "icy mountains," "mosquitoes appear in the months of June, July, and August, in myriads" to trouble a wretched and sparse population—(Edin. Encyc.)—the very months in which they torment Louisianians the most. The latter are annoyed a month sooner, and often six weeks later.

Mosquitos in times past and in different places.—The Jesuit Father Du Poisson, in his voyage from New Orleans to the Arkansas river, commencing on the 25th of May, 1727, in company with Fathers Souel and Dumas, "under the direction of the good man Simon," gives, during the first days of his voyage, the following account* of the mosquitoes a century and a quarter ago. "This little insect" (the mosquito) "has caused more swearing since the French have been in the Mississippi than had previously taken place in all the rest of the world. Whatever else may happen, a swarm of those mosquitoes embark in the morning with the voyager. When we pass among the willows or near the canes, as very often takes place, a new swarm fastens with fury on the boat, and never quits it. It is necessary to keep the handkerchief in constant exercise, and this scarcely frightens them. They make a short circuit and return immediately to the attack. When we land to take dinner, there is an entire army to be combatted. We make a great fire, which we stifle afterwards with green branches. But it is necessary for us to place ourselves in the very thickest of the smoke, if we wish to escape the persecution, and I do not know which is worse, the remedy or the evil."

"One is eaten and devoured. They get into the mouth, the nostrils and the ears; the face, the hands, and the body are all covered; their sting penetrates the dress, and leaves a

* Drake. Valley Miss., i. 111 et seq.

red mark on the flesh, which swells on those not yet inured to their bite." "After having supped with haste, we are impatient to bury ourselves in the *baire*,* although we know we go there to be stifled with heat. With what address, with what skill does each one glide under his *baire*! But they always find that some (mosquitoes) have entered with them." "May 31st, devoured by the mosquitoes at night. June 3d, arrived at a spot above the Manchat, [Manchac] Bayou Iberville, a branch of the Mississippi which empties into the Lake Maurepas—millions of mosquitoes."

In Richard Hackluyt's translation from the Portuguese of De Soto's Expedition from 1539 to 1543, (published in London, 1609,) it is related, that while the voyagers coasted along the Gulf of Mexico, probably near the mouths of the Mississippi, "the mosquitoes fell upon the men in infinite swarms, producing intolerable torment—stung them—infected their flesh as if they had been venomous. The sails were black with them."

Thus it was at the mouth of the Mississippi more than three centuries ago, and so it is now upon its head waters. Dr. Owen, United States geologist, in his magnificent work—the Geological Survey of Wisconsin, Iowa, and Minnesota, published by the authority of Congress, in 1852, says that "a cause apparently trivial will long delay the settlement of certain regions which he mentions; he says that this cause is the prevalence, especially on the upper Wisconsin, St. Croix, and Black river countries, and thence north to the British line, of venomous insects, the *brulôt* or buffalo gnat, sand-flies, and mosquitoes. At some of the worst spots we could scarcely have discharged our professional duties at all, without a constant protection of mosquito netting."

The luxuriant valleys and humid regions of tropical America, where but little improvement has been made by human hands, the mosquitoes are probably as numerous as they were in the days of Columbus. The late Mr. Stephens, in his travels in Central America in 1841, says: "I verily believe that a man could not, on the banks of the Rio Palisada, have passed an entire night and have lived." Alcedo, one of the early writers on America, gives a similar account of portions of the territory which now forms the state of Tobasco, in Mexico, where, as he affirms, "the mosquitoes scarcely suffered men to exist." Dr. Mosely, in his elaborate work on tropical climates says "that these insects are vexatious in all the West India islands, but are yet worse on the continent.

* *Baire*—an old, obsolete French word for *barre*, not found in the Dictionary of the Academy.

In Mexico and some other places, it was said that they sometimes killed people." Peter Martin, and other historians, in their accounts of the Spanish discoveries in South America, nearly three and a half centuries since, alluded to mosquitoes as being very formidable in marshy regions, where they "filled and darkened the air like clouds."

Re-productive Power.—Entomologists affirm that the flesh-fly (*Musca Carnaria*) family muscida, gives birth to 20,000 larvæ—these larvæ devour so much food that in 24 hours their weight is increased 200 times, and they attain their full size in five days: "there is ground, says Kirby, for the assertion of Linnæus that three of these meat flies could devour a dead horse as quickly as a lion." Such are the ravages of a dipteran like the common house fly. (*Musca Domestica*.)

The mosquito is supposed to lay 300 or 400 eggs five or six times in a season where the summer is long—say 2,000, which in two days become larvæ; in 15 pupæ or nymphæ; in 21 winged insects; a small number compared with the aphis, the plant insect, of which there are many varieties; one of these, according to Reaumur, produces 5,904,900,000.

Water. Food.—Water is necessary to the reproduction and sustenance of mosquitoes. They walk and deposit their ova upon it, but cannot re-enter it without drowning, after having cast off their nympharobes. The temperature of nine out of the twelve months of the year is, in the climate of Louisiana, favorable, with few exceptions, to the development of mosquito ova and larvæ, while all the other agencies favorable to their generation and sustenance abound in many places almost perennially, particularly in New Orleans; as stagnant, filthy waters, exuberant in animal and vegetable organizations, produced by a luxuriant soil and the refuse of the city, stimulated into rapid putrefaction by a hot sun; conditions but too well adapted to produce a vast mosquito crop, while the environs of the town afford these insects complete protection from the intensity of the sun and the turbulence of the winds, by means of the grasses, shrubs, palmettoes, and cypress forests, the whole constituting a mosquito elysium for these pestilent dipterans, both rural and urban, permitting them to choose the polluted water with its microscopic plants and infusorial animals, or the Caucasian, Indian and African blood.

The turbid waters of the Lower Mississippi, whether flowing in its natural channel or in pipes and hydrants, does not appear to be congenial to several animals and insects found in its tributaries, as water-bugs, tadpoles, etc; nor does it seem adapted to mosquitoes as a medium of ovulation, larval

development and nutrition ; this is owing (it may reasonably be supposed) to the extraordinary purity of the water itself, not to its temperature, nor, perhaps to its current ; I say purity, notwithstanding the vast amount of detrital matter suspended in its current, and comminuted to extreme fineness. Perhaps there is no river freer of animalcular, infusorial and microscopic organisms and microscopic plants. Of Muller's seven or eight hundred infusorial species, none appear to abound in the Lower Mississippi. The river water which reaches New Orleans has its sources, for the most part, thousands of miles distant. The rains which fall in the Delta run not *into* but *from* the river. Hence whatever purification a running water can derive from a prolonged flow without receiving tributaries towards its debouchure, this river has, seeing that it traverses eighteen parallels of latitude, not to mention longitude, giving an austroboreal axis of nearly one third of the distance from the tropic of Cancer to the North Pole.

The extraordinary salubrity of the water of the Lower Mississippi had always been noticed and believed from the earliest times, though of late, since the prevalence of yellow fever epidemics, a few individuals have erroneously drawn different conclusions.

The late Dr. Drake maintained that its "water is medicinal, and especially adapted to the cure of chronic functional disorders of the stomach, bowels and liver," while the Upper Mississippi contains, according to Professor Baily, quoted by Dr. Drake, abundance of microscopic infusoria—"a specimen of water taken opposite the city of St. Louis had no less than twenty species, all living and active, a part of them soft, and a part with hard silicious shells. Most of the species were in great numbers." (Valley Miss., i. 72.) These are, it may reasonably be supposed, adapted to nourish the mosquito, other conditions being favorable.

From the circumstances above noted and from the fact that the Lower Mississippi receives no filth from tributaries, excepting what is actually thrown into its enormous volume, its purity is easily explained.

It is very far different with short, small rivers, passing through densely populated districts, receiving the refuse of the soil and of the population. Such is the river Thames, which affords the drinking water of Londoners, and which, judging from a series of microscopic observations and engravings published a few months since in the London Lancet, illustrating the impurity of that stream, is a liquid having for its *substratum* an infinity of living forms and plants of

the most *bizarre* configurations—the water being the menstruum of an exuberant filth and infusorial organisms. The Big Drink, as the Mississippi is unclassically called, has but little foreign matter in it beyond its suspended and undissolved silicious, aluminous and some similar substances, while the wells along its shores abound with saline matters, together with other impurities.

So far as I have been able to observe, the Mississippi water is avoided by the mosquito as a medium for hatching, and food.

The food of the mosquito is derived from the flora and infusorial organisms in the waters of a country, rather than from its red-blooded animals. A naturalist defines the mosquito thus: "a little active insect which *lives by sucking the blood of other animals!*" Naturalists generally assert that the female mosquito alone has an appetite for blood. Whether this be true I do not pretend to say, although it cannot be a difficult question, as the male may be recognized by its feathery antennæ or plumes.

The South American Indians, as travellers assert, often ask the question—how did the mosquitoes live before the people came among them. The following experiment will, in part, explain this mystery.

Some years ago, a lady sent me a glass half filled with cistern water containing animalcules, for microscopic examination. The glass was carefully covered on the top with paper, the latter having numerous holes made with a pin to admit the air. These animalcules proved to be the *larvæ* of mosquitoes. These larvæ having passed through all the stages of transformation peculiar to their class, and having freed themselves from their entangling envelopes, took wing and flew from side to side within the glass, occasionally alighting on the water, whence, Venus-like, they had emerged altogether perfect at first.

For many days they were thus kept in prison, and grew larger and more active, without having had any other food than that derived from this impure water. And here I may remark, that after the straining of impure cistern water through a linen cloth, myriads of living animalculæ may often be seen in motion by those persons who possess very strong vision for short distances—at least I possess this power. Such water is, doubtlessly, not only favorable to the ovulation and larval development of mosquito life, but rich enough in animal and vegetable substances (visible with the naked eye, and still more by the microscope,) to afford nutriment to the perfect insect. Substances are raised by winds to the roofs

and gutters of houses, to be washed down by rains into cisterns, where they accumulate, ferment, and turn putrid. On the supposition that the mosquito is not a vegetarian but an animal-feeder, truly carnivorous, the necessity for cleanliness and drainage is not, for that reason, the less obvious, because moisture, filth, and putrefaction, generate microscopic animals (the Infusoria) to the greatest possible extent, and consequently afford the greatest amount of food and the greatest number of mosquitoes. It so happens, however, that these agents produce equally microscopic plants and infusional animals, so that the essential conditions of mosquito well-being will remain after the abstraction or change of all other agents, as red-blood animals.

Influence of temperature upon the Mosquito.—While most animals and plants are restricted to certain climatic or geographical regions, having but a limited range of temperature, where, alone, they can permanently exist, the cold-blooded mosquito flourishes alike in the eternal verdure of the tropics and in the glacial zone, in depressed marshy valleys between mountains capped with everlasting snows and glaciers, remaining torpid during the long night of five or six months, but swarming forth during the prolonged day of summer, always, however, greatly influenced by temperature in every climate.

There can be little doubt that in very cold countries this insect undergoes congelation every winter without losing its vitality, as is known to be the case with some other insects. Dr. Carpenter says that "in one of Captain Ross' arctic voyages, several caterpillars of the *Larva Rossii* having been exposed to a temperature 40° below zero," [72° below the freezing point,] "froze so completely that, when thrown into a tumbler, they chinked like lumps of ice. When thawed they resumed their movements, took food, and underwent their transformation into the chrysalis state. One of them which had been frozen and thawed four times subsequently became a moth. The eggs of the slug have been exposed to a similar degree of cold, without the loss of their vitality." Still, however, the influence of temperature upon the mosquito is, in all climates, very striking: for example—all sudden changes from hot to cold temporarily benumbs it; but after the first shock, if the temperature be not very low, it gradually recovers its activity, with or without the occurrence of an increase of atmospheric heat during the interval within certain limits. A temperature that proves torpifying to it in Louisiana, proves pleasant, or perhaps oppressive, in very high latitudes. This monograph shows that in the arctic

regions, at a temperature only a few degrees above the freezing point, mosquitoes become active. I might show from a record of the temperature, the weather, and the mosquitoes of New Orleans, kept daily for many years, that the Louisiana mosquito is sometimes rendered torpid in the hot season, even when the thermometer ranges above 80° , provided it had ranged much higher within a day (more or less) previously: thus—1839; August 14th, 8 a. m., air 78° , showing a decline of 15° in as many preceding hours; mosquitoes feeble, Aug. 15th; 8 a. m., 76° —at 10 a. m., 78° —at 10 p. m., 80° ; mosquitoes almost torpid. On the three following days the mercury reached, sometimes transcending, 80° ; easterly winds prevailing, yet the mosquitoes, chilled by the cold, remained inactive at a temperature 30° or 40° above that required to benumb an arctic mosquito.

In uniform weather, the Louisiana mosquito may be, and often is, very active, particularly in the vernal and autumnal seasons, while the temperature is much lower than that indicated above. Although a sudden change from 90° to 75° may torpify the mosquito, it does not follow that the former is, upon the whole, more congenial to its active habits than the latter. Far from it. The weather may be too hot for mosquitoes as well as for man.

The same degree of temperature may produce torpidity, or activity indifferently within a certain limit, owing to late, sudden, or gradual caloric oscillations of the atmosphere:

1846.	Oct.	12,	air at sun-rise	71° ;	mosquitoes active.	
	"	"	"	"	61° ;	" feeble.
	"	"	"	"	58° ;	" feeble.
	"	"	"	"	$55\frac{1}{2}^{\circ}$;	" torpid.
	"	"	"	"	63° ;	" active.

Here, a sudden fall of 10° produced feebleness; a further decline of $5\frac{1}{2}^{\circ}$ torpidity; a rise of $7\frac{1}{2}^{\circ}$ restored activity, though this rise was only 2° beyond that at which feebleness took place in the first instance, when the fall within the 24 hours preceding had been 10° .

THE TERRITORY OF KANSAS.

KANSAS or KANSAS, a territory of the United States of America, formed by an act of Congress passed May, 1854, lying between 37° and 40° north latitude, and between about 94° and $30'$ and 107° west longitude. About 100 miles of the west portion lies between 38° and 40° north latitude. It is bounded on the north by Nebraska Territory; east by the

States of Missouri and Arkansas ; south by Indian Territory and New Mexico ; and west by New Mexico and Utah. This territory is about 630 miles in length, from east to west, and 208 in its widest, and 139 in its west part, including an area of 98,000 square miles. The Rocky Mountains separate it from Utah, and the Missouri river forms a small part of the northeast boundary.

Face of the country.—(We quote HALE and his authorities.) The face of the country is nearly uniform from the State line to the base of the mountains, being one continued succession of gently undulating ridges and valleys ; the general inclination of the ridges is north and south, but they are thrown into various other directions by the course of the streams and the conformation of the valleys. The first district varies in width from 80 to 200 miles. The second district, separated from the first by a tortuous belt of 100 yards in width, presents to the eye a surface apparently of sand, but covered with grasses and rushes, especially in the valleys and hollows, where grass is abundant during the whole season. This district extends from Sandy Creek west about 350 miles. The third district, a narrow irregular belt, is a formation of marl and earthy limestone, continued south from Nebraska. In this district occur those peculiar formations called "buttes," varying in width from 100 feet to several hundred yards, with flat surfaces, and nearly perpendicular sides, apparently formed by the subsidence of the surrounding land. The fourth district is somewhat similar to the first, at least along the base of the Black Hills, where it has been enriched for ages by the debris ; but there is more wood upon it. The east portion is pastoral, but the west, skirting the hills, fertile, finely timbered and watered, abounding in game, wild fruits and flowers. The fifth district, occupying the space between the Black Hills and the Rocky Mountains, presents every variety of hill and dale, mountain and valley, traversed by rivulets, and adorned with lakes ; west of this succeeds a sterile expanse of many miles, covered with waving lines of sand, and surrounded by peaks of bare granite ; there are, however, some rich valleys, and the hollow murmur of rivulets may be heard beneath your feet. The first district has a limestone basis, and the great coal-fields of Missouri extend 30 or 40 miles into it. This portion is unrivalled in fertility, and has valuable forest trees, including hickory, ash, walnut, and sugar-maple, but it is not quite so well timbered as the country in the same range in Missouri. The valley of the Kansas is here from 20 to 40 miles wide, has a deep alluvium, and is very productive. The valley of the Missouri is of a similar character. Between the Nebraska and Platte rivers,

says Professor James, the surface of the country presents a continued succession of small rounded hills, becoming larger as you approach the rivers. The soil is deep, and reposes on beds of argillaceous sandstone and secondary limestone. The second district is underlaid by sandstone; the basis of the third is not known, nor is that of the fourth and fifth. Coal is believed to exist plentifully in the last two, as well as an abundant supply of water-power.

Rivers.—The rivers following the declination of the country all have an east or southeast course, with the exception of some of the smaller tributaries. The Missouri forms the northeast boundary, through nearly a degree of latitude, with but little variation to the west, though with many windings. The Kansas, the largest river whose course is mostly within the territory, joins the Missouri just before the river enters the State of Missouri. Including its main branches, the Republican and Smoky Hill forks, it has a course of from 800 to 1,000 miles. The latter runs nearly through the middle of the territory in a direction a little north of east. The Republican fork rises in the northwest of Kansas, but soon passes into Nebraska, which traverses from 200 to 300 miles, when it returns to Kansas, and joins the Smoky Hill fork in about latitude $30^{\circ} 10'$ north, and longitude $96^{\circ} 40'$ west. The principal tributaries of the Kansas below the junction are, from the north, the Big Blue river, rising in Nebraska, and by far the largest; Egoma Saha; Soldier's creek; Santelle and Stranger rivers; and from south Wacharasa. The chief affluents of the Smoky Hill fork are the great Saline and Solomon's forks, both from the north. The Osage rises near 97° west longitude, south of the Kansas, and passes east into Missouri. The Arkansas rises on the west boundary, and has, with the exception of a slight bend into New Mexico, about half its course in this territory. The Neosho, the Verdigris, and the Little Arkansas are its principal tributaries from Kansas, all in the southeast portion. The Little Osage and Marmaton have their sources in this territory. The Platte has its origin in the north of Kansas, and runs north into Nebraska. Steamboats ascend the Kansas to Fort Riley, and the Arkansas, at high water, 100 miles within the territory. The rivers in general have broad, shallow beds, which, in dry seasons, form little more than a series of pools.

Objects of interest to Tourists.—Prominent among these stands Pike's Peak, near the west border of Kansas, which soars to the estimated height of 12,000 feet, and is always covered with snow. The usual variety that characterizes mountainous regions, of gorge, precipice, pass, peak, valley,

and cascade, is here exhibited. The South Park is a beautiful natural inclosure, covered with grass and surrounded by mountains, at a great elevation above the sea. The buttes have been already referred to. Even in the east and middle sections, splendid panoramic views may be enjoyed from the river-bluffs, which rise from 50 to 500 feet.

Minerals.—Reddish, yellow, and blue limestone, with a tendency to crystalization, chert, granite, feldspar, red sandstone, (often occurring in boulders of several tons weight,) and coal in several places, are the known minerals, besides pebbles of granite, quartz, and porphyry, with some large blocks of porphyritic granite.

Forest Trees.—For 200 miles west of the Missouri, several varieties of oak, ash, sycamore, hickory, buckeye, walnut, hackberry, sugar-maple, and sumac are found in considerable abundance on the river bottoms; while in the second district timber is very scarce, except a few cottonwood and willow trees on the margin of the streams. In the mountainous regions of the west, forests of cedar, pine, poplar, and quaking ash, clothe the slopes of the Rocky Mountains, while the river-bottoms are covered with cottonwood, willow, box-elder, cherry, currant, and service bushes.

Zoology.—The buffalo, elk, deer, antelope, prairie dogs, and squirrels are among the quadrupeds; and of the feathered tribes there are the wild-turkey and goose, prairie-hen, partridge, golden oriole, blue jay, red bird, crow, and a great variety of the smaller birds. Among the reptiles is the horned frog.

Forts and Stations.—First among these are the forts, viz: Fort Riley, near the confluence of the Republican and Solomon's Forks of the Kansas; Fort Leavenworth, on the Missouri river, 31 miles above the mouth of the Kansas; Fort Atkinson, on the Arkansas, near the 100° of west longitude; and Bent's Fort, on the Arkansas, between 103° and 104° west longitude. The stations are Walnut Creek Post Office, on the Arkansas, at the mouth of the creek of that name and near the 90° of west longitude; Big Timbers, a favorite council-ground and rendezvous, 35 miles below Bent's Fort; Pueblo de San Carlos, on the upper Arkansas, in the 105° of west longitude; a post office at the Delaware city, 10 miles above the mouth of Kansas; Elm Grove, a noted camping-ground, 25 miles west of Westport, Missouri; and Council Grove, a famed stopping-place on the Sante Fe trail, in about 38½° north latitude, and 96½° west longitude. There are besides a large number of missionary stations, among which are the Kickapoo, 4 miles above Fort Leavenworth; the Iowa and Sac, near the north boundary; the Shawnee

(Methodist,) 8 miles up the Kansas; and 2 miles from it the Baptist, and at 3 miles the Friends' school. Sixty miles up the Kansas is the Catholic mission among the Pottawatomies; Mecker's Ottawa mission, south of the Kansas river, near the Missouri line; and near the Baptist Missionary and Labor School; and the Catholic Osage mission, on the Neosho river, in the southeast of the territory, which has one of the largest missions and schools in Kansas, and has ten sub-missionary stations within 60 miles of it, which are visited monthly from it.

Population.—The population of this new territory is mostly comprised of wholly or partly domesticated Indians, (in many instances removed thither from east of the Mississippi,) and of the nomad tribes of the interior and west portion of Kansas. Among the former are the Sacs and Foxes, Iowas, Kickapoos, Pottawatomies, Delawares, Shawnees, Kansas, Chippewas, Ottawas, Peorias, Kaskaskias, Piankeshaws, Weas, Miamies, Osages, and Cherokees; the latter are only partly in this territory. Of the nomad tribes, the principal are the Camanches, Kiowas, Cheyennes, and Arapahoes. Large portions of the claims of the domesticated Indians have already been extinguished, and this process is still going on, and they will probably soon have sold all, and have been removed, or absorbed in the mass of the citizens. Intemperance, improvidence, and disease are powerfully co-operating with the greed of the white man in sweeping them from the face of the earth. That portion of them, and there is such a portion, who are receiving the education and habits of civilization from the missionaries, will probably be gradually incorporated with the mass of the citizens.

Government and History.—The government of Kansas is similar to that of other territories of the United States.

Kansas formed part of the great Louisiana purchase acquired from France in 1803, and subsequently formed parts of the Missouri, Arkansas, and Indian Territories, from which last it was, (as has been stated,) in 1854, erected into a separate territory, after a stormy debate in the national Congress as to whether the Missouri Compromise (an act passed in 1820, forbidding slavery north of 36° 30' north latitude,) should be repealed. The repeal was carried by a large majority in the Senate, and a decided one in the House; it being thus left to a majority of the white inhabitants of the territory, when they may apply for admission into the confederacy as a State, to allow or forbid slavery as they may deem proper. *

* See Gazetteer by Lippincott, Grambo & Co., Philadelphia.

THE OVERFLOWS AND FRESHETS OF THE MISSISSIPPI.

CAN THE WATERS OF THE MISSISSIPPI BE SO CONTROLLED AS TO PREVENT FUTURE DESTRUCTIVE FRESHETS?

If it could be answered affirmatively, millions of property would be saved from destruction, New Orleans placed beyond the danger of overflow, thousands of fertile acres added to cultivation, and good navigation given to the Ohio throughout the year. The value of the enquiry may justify the attempt, though my remarks may rather be considered as speculations on possibilities than a demonstration of strong probabilities. Professor Ellet, the boldest thinker and perhaps the ablest engineer of the day, has shown in his own able report on that subject, that about five large granite dams with 250 feet base and 60 feet of elevation, with large and substantial gates or locks put on and across the upper tributaries of the Mississippi, such as the Monongahela, the Allegany and others, would make lakes extending many miles back to the widths of their valleys. These lakes would retain the over supply of waters till the rivers would have time to run off their great over surplus. They would hold back when too much, and let off when too little, and regulate navigation.

The great causes of these inundating freshets are, the general winter rains with the great accumulations of snow and ice, which, melting in the early spring, send down their enormous supply in overwhelming torrents. There may be, perhaps, a month's rain held up in snow and ice, waiting for the melting season, which coming on, the then full rivers from the general rains give such an accumulated mass that its consequences must be a destructive overflow. The freshets are always in the spring and summer and, except 1849, never known in the fall. It is to restrain this periodical over supply that these large lakes are intended, and stopped in proper time would retain water enough to furnish enough for moderate navigation through the dry period of fall and early winter. When a river is low, it takes but little water to give tolerable navigation, and when very high, it discharges over so much space as only to want a little time to clear itself. These lakes are intended for this double purpose, and to my mind carry the probability of effecting it. Will these dams cost too much; will they stand; and will their flooding back be too injurious to private property? The dams may cost \$250,000 each, well sloped on the water side to receive the pressure on, rather than the force of the water against, would stand. The invasion on private rights would not be more than the sacrifices to all great internal improvements; but on this head the report is satisfactory. It may be said that it is

expecting too much from so small means; and it is certainly the true inquiry. Let us examine a little further before deciding, remembering that these resources of water are to give time. The mass of winter water is certainly very great; but the outlets for its discharge are made by, and are commensurate with it. It was made too at a time when all its great valley, being uncultivated and in a state of nature, the accumulations coming from the same cause were passing at the same time and therefore greater, and required and made the greater vent. The Missouri, the upper Mississippi, and the Ohio, sent their waters down at the same time, and were to be provided for conjointly. Now the cultivation on the Ohio, by cleaning up the surface, gives a much quicker passage to the rains, and the great stream receives this tributary much earlier and in a measure disposes of it before the others come in. The Mississippi above Vicksburg receives and carries in her the waters of all her tributaries. They are all inlets to swell her floods. Below Vicksburg, all are outlets to diminish her floods. The great Ouachita, with her tributaries of the Crocodile, Macon, Boeuf, and Tensaw rivers, running through the back swamp, is the first great outlet. The Achafalaya, through the mouth of the Red river, and the Plaquemine, are also great outlets. In the neighborhood of Vicksburg, judging from the fact of its there ceasing to receive, (with but very little exception,) and there commencing to pass off its waters, the overflow ought to receive its highest elevation. I am not sufficiently acquainted with facts to say it is so; I can only say it ought to be so. At Natchez, the whole river and swamp is embraced in a space of 32 miles, and the waters here are confined to large streams and cover less swamp than anywhere else below the mouth of the Ohio. Below this, the average space covered by a great overflow may be 70 miles of back swamp, and there must be nearly as much water passing into the Gulf as is carried by the river past New Orleans.

The above details make it probable that distinctive freshets could be prevented, and that summer navigation, as high up as Wheeling, would be afforded by pouring from these reserved lakes into the river in due proportion a proper supply for the purpose. These advantages would be cheaply paid for at \$1,250,000, the supposed cost, or at two millions. I shall close this article with a short notice of two other conflicting opinions on the same subject. The one proposes to confine the river to its bed, deepening the outlet at the entrance into the Gulf and closing the others, so that by its increased volume and speed it may scour out and remove the

OVERFLOWS AND FRESHETS OF THE MISSISSIPPI.

soft mud at its bottom, and carry it with all its other materials in solution into the ocean. It is claimed as being in consonance with the operations of nature. The other is, that sluices or other outlets at such elevations as only to come into use to pass off superfluous water are a better security, and that the dredge is the only dependence to deepen the bar. This is also claimed as an example from the operations of nature. They both have difficulties. Nature certainly acts on the first plan with this qualification, that so soon as the flood overtops the banks it relieves itself of the superabundant materials or debris, by throwing it out on the sides or banks where it is stopped by the canes and reeds and there deposited, and the filtered water passes into the back swamp. Whatever may be the rivers length, the abundant floating materials and alluvium, are measureably disposed off by these lateral overflows and filtrations, and saved from deposit on the bottom; and though they rise higher and higher every year, it is to a small extent, and their relative heights continue the same. When levees are put up, and the reeds and canes and other growths that caught the coarser and larger debris are gone and give place to a smooth surface it cannot relieve itself, and the current carries along all its materials, and when checked for want of supply, deposits from necessity a larger quantity on the bottom and within the levee. The river fills up faster; the levees require raising, and in time the bed of the river will be higher than the base of the original levees. Such is said to be the case with some of the old settled rivers of Italy and Germany. Old Methusalem, if now born, might live to see the surface of the Mississippi higher than the dome of the St. Charles if it could be confined within its banks by levees. The operation of nature might make it reach the same elevation, but it would also have deposited a surface of soil to the same height. The other plan is to leave the river to its own course and only provides a safety valve to commence operating when the flood approximate a dangerous overflow. Suppose two or more sluices, one fourth of a mile wide, were to be kept open above and below New Orleans, at such convenient places as to discharge quickest into the Gulf, their bases to be five or six feet below what would be considered a dangerous overflow, it would certainly save the city and much of the river lands; but how is a base of such extent to be saved from undermining and washing away? It is one of those matters that there should be a certainty of success in before the attempt should be made. This must be left to skill and wise heads, for to say least of it, it is a dangerous experiment.

Reviewing the whole subject, the plan seems preferable that proposes to retain the surplus water at the upper sources of our rivers, and surrender it to the stream at low water at the call of navigation. If the Plaquemine could be stopped with propriety, and it could be easily done by the spade, it would give to cultivation a large body of rich land on the lower Atchafalaya, and other bodies of land interspersed in the great wilderness of waters travelling to the Gulf between the La Fourche and the Teché. I have intended by this description of the river to show, that though the mass of its waters are very great that its outlets are equally great, and greater as the river lessens in height as you approach the Gulf. All that is wanted is a little time, as it has ample means of clearing itself of its over supply; and further, that the cultivations and drainings on the Ohio, will every year more and more send its waters earlier into the Mississippi to be disposed of before it receives those of the Missouri, which being yet to a great extent in a state of nature, holds for slower drainage, water kept on the surface by grass, weeds, trees, and other growths of all kinds. The waters in the river come with speed, in the back swamp at a snail's pace. It is probably more than two months in reaching the Gulf from the upper sources.

MANUFACTURES, MINING, AND INTERNAL IMPROVEMENTS.

RAILROAD AND WATER COMMUNICATION.

BY G. W. MORSE, STATE ENGINEER OF LOUISIANA.

I trust you will excuse me in dwelling so long upon this portion of my report, in consideration of what I conceive to be its importance.

There has been much discussion in reference to the propriety of employing white instead of slave labor, and also as to the adoption of the contract system in place of the one now in use. The State engineer, whose only business is to conduct the internal improvements of the State, should certainly be able to throw some light upon these questions. A new system of book-keeping has this year been adopted, which enables us to show in detail the expenditures for different objects since I took charge of this department, and would also aid us in forming correct opinions in reference to those subjects. Our provision bill for the year 1853 amounted to

\$5,048 41, or, per head for each negro, including provisions for superintendent of every twenty-five hands, \$47 62. Our clothing bill was \$2,288 15, or \$28 51 per hand. In the year 1854 our provision bill amounted to \$5,677 73, which includes some small bills for surveying parties. Our whole clothing bill amounted to \$1,942 58, which would make the total cost per head for negro provisions and clothing \$73 98½.

This I do not think very extravagant, when we consider that the superintendents were all furnished from the same provisions, and that many articles are required for negroes working on boats and in camp which they would not want if living on plantations where an abundance of vegetables could be obtained. We purchase everything, while on plantations corn and more than half the food necessary to support life are raised. As far as my experience goes upon the question of the employment of white or slave labor, and I have employed both, the former on the Barrataria and Lafourche canal, and on the works at the mouth of the bayou Plaquemine, the result stands as follows: This department has employed for the last two years an average of one hundred and three negroes, at an average cost for provisions and clothing for the two years of \$7,478 00. Nine of them have died in the meantime, one from old age, two from chronic diseases previously acquired, and the other six able men, so that although nine have died in the two years, the State has lost but four per cent. of its capital each year of that time. The account should stand thus, estimating the negroes at \$1,200 each:

Value of 103 negroes, at \$1,200 each	\$123,600
Interest at six per cent. on stock for one year	- \$7,416 00
Loss on stock for one year four per cent	- - 4,944 00
Provisions and clothing	- - - 7,478 00
Total	- - - - - 19,838 00

Total cost for each slave per year	- - - 192 60
Cost per month	- - - 16 05
One year's labor of 103 white men, at \$35 per month, including provisions	- - - 43,260 00
Making a difference in favor of slave labor per year of	- - - 23,422 00

White labor at Lockport two years ago cost the State one dollar per day and board, and the men whom we hired boarded at that place cost us \$15 per month, making the cost equal to \$1 57½ per day, or \$41 per month. At Plaquemine this year Captain Lawes, who was the contractor for public works, paid his laborers from \$1 50 to \$1 62½ per day, they boarding

themselves. Thirty-five dollars, then, per month for white labor cannot be too high an estimate, including cost of board. This calculation is based upon positive facts upon record in this office, and therefore must be correct. There is, however, one item not taken into the account, and that is the fact that negroes in this climate will, for the year round, perform much more labor than an equal number of white men—I think the difference is about two to three—or that twenty negroes will perform as much hard labor as thirty white men, which would increase the difference in favor of slave labor from \$23,422 to \$37,475 per year. This last difference is not alone owing to the fact that the negroes can work on during the sickly season, while many of the white laborers fail, but to the fact that they are better able generally, and, in my opinion, do actually perform one-third more work. The cost of superintending white and slave labor must necessarily be about the same. Another disadvantage attending the employment of white laborers is the fact that they are more difficult to control than the negro, and when they know you are most dependent on them they will either demand higher wages or leave you. The State force now consists of ninety-seven men, eight having died during the year, four of cholera, two drowned, and two of old chronic diseases, and some ten or fifteen of those remaining are now too old for active and hard service. We should have four hundred more, a part of whom should be placed on our boats to learn how to manage them before the old set are gone. Twenty-five, composed in part of the present force and part of the new, to be placed upon a new, large, and strong boat, made expressly to open the Atchafalaya, and the remainder to be employed clearing off the banks of the most important streams, so that when the snags shall have been removed they will continue clear of them.

Perhaps no country on earth as rich as Louisiana in agricultural resources has greater natural advantages for water communication, and it is acknowledged that transportation by water is the cheapest and best which the wisdom of man has yet discovered. If it were otherwise, why should the State of New York, at an enormous expense, enlarge the Erie canal, especially as railroads traverse the State in every direction, and one even along the banks of the canal itself? Both the road and the canal are required, the former for passengers and light freight, where speed is an object, and the latter for the heavy produce of the country; but the canal transports one ton of freight one mile for one cent and one mill, while upon the New York and Erie railroad it costs two cents and

four mills. For the same distance on the Hudson river the same thing costs seven mills, while on the Hudson river railroad it costs three cents and one mill, and on the New York Central railroad three cents and four mills; and the comparison might go on through all the navigable rivers and canals in the United States, and the result would be the same, namely, that water communication is much the cheapest, and more especially for a planting community like ours. In order that it may not be said that I am mistaken in the facts of the case, I insert the following table, an extract from the annual report of the State engineer and surveyor of canals in the State of New York, dated February 9, 1854, which shows the cost of transportation by railroads and canals in different States.

Charges for transportation between the seaboard and the west, by the various railroads and water lines.

	Per ton (of 2,000 lbs.) per mile.	
	Cents.	Mills.
<i>From New York:</i>		
Hudson river - - - - -	—	7
Erie canal - - - - -	1	2
Western lakes, short voyage - - - - -	1	—
Do. long voyage - - - - -	—	5
New York and Erie railroad - - - - -	2	4
Hudson river railroad - - - - -	3	1
New York Central railroad - - - - -	3	4
Western roads, from Buffalo to Chicago, average	2	5
<i>From Boston to Western Lakes:</i>		
New England roads from Boston to Rouse's Point	2	7
Northern road, Rouse's Point to Ogdensburgh	2	—
Lake Ontario and Welland canal - - - - -	—	7
Western road, Boston to Albany - - - - -	2	3
<i>From Quebec:</i>		
St. Lawrence river and canals - - - - -	—	6
<i>From Baltimore:</i>		
Baltimore and Ohio railroad - - - - -	3	—
<i>From Philadelphia:</i>		
Pennsylvania canal to Pittsburgh - - - - -	2	4
Do. railroad do. (estimated)	3	5
Ohio river - - - - -	—	8
<i>From New Orleans:</i>		
Mississippi river, (lower) - - - - -	—	6
Do. (upper) - - - - -	—	9

Ohio canals	-	-	-	-	-	1	—
Wabash and Erie canal	-	-	-	-	-	1	9
Illinois canal	-	-	-	-	-	1	4
Do. river	-	-	-	-	-	1	2

In the ordinary boating stage of Red river a bale of cotton, weighing one-fourth of a ton, is carried from Shreveport to New Orleans for the sum of \$1 25; distance, say about six hundred and fifty miles, which makes the cost less than two mills per mile, or for four bales, equal to one ton, less than eight mills per mile. In ordinary low water, after the boats cease running over the falls at Alexandria, the price has been \$2 50, water still lower \$3, at which rate very little is shipped; and the cost in the very lowest water has gone up to \$5 per bale, at which price, of course, not one thousandth part of the crop would be forwarded to market. For as the planters have generally held back their cotton for a rise in the water, rather than pay double freight, which is \$2 50 per bale, how can it be expected that they will ship when the cost is from \$3 50 to \$5? If the roads could compete successfully with these prices how much could they carry, or what portion of the whole river crop could they take to market, touching the stream only in two or three places in its whole length.

The practical working of some of our railroads may be seen below, where four and one-half bales of cotton is supposed to be equal in weight to one ton of two thousand pounds, and one hogshead of sugar equal in weight to twelve hundred pounds.

	Articles carried.	Distance in miles.	Price paid.	Cost per ton per mile.	
				Cents.	Mills.
West Feliciana railroad..	Bales of cotton.	28	\$1 75	28	1
Port Hudson railroad....	Bales of cotton.	28	50	8	—
Great Western railroad..	Hhds. of sugar.	52	1 50	4	8
Great Northern railroad..	Bales of cotton.	97	1 00	4	6
Mexican Gulf railroad...	Hhds. of sugar.	27	1 00	6	1½
Mexican Gulf railroad...	Bales of cotton.	27	25	4	1½

Now, suppose we had a railroad constructed between New Orleans and Shreveport, in a distance of 365 miles, and that the road were to carry freights at the same prices that are now paid for river transportation, in the present miserable condition of the river, and then see how these prices would remunerate the road—each bale of cotton, weighing five hun-

dred pounds, which is believed to be the average weight of Red river cotton shipped in low water.

Railroad from Shreveport to New Orleans.

	Bales cotton.	Distance in miles.	Prices now paid.	Per ton (of 2,000 lbs.) per mile.	
				Cents.	Mills.
Ordinary boating stage of R. R.		365	\$1 25	1	3½
Boats stopping at falls at ordinary low water of river.	} Present river prices.	365	2 50	2	7½
Very low.....		365	3 50	3	8½
Lowest water ever known.....		365	5 00	5	5
Railroad cost estimated in accordance with prices paid on Great N. & Great W. roads.....		365	4 29	4	7

Similar results will be shown if we undertake to transport cotton from Shreveport to Vicksburg, and then to New Orleans by the Mississippi river; railroad distance estimated at 176 miles, price per ton, estimated at four cents seven mills per mile, or the same as now paid on the Great Northern and Great Western roads.

Bales weighing 500 pounds.	Bales cotton.	Distance in miles.	Price paid.	Per ton (of 2,000 lbs.) per mile.	
				Cents.	Mills.
Railroad		176	\$2 06	4	7
Thence to N. Orleans by river.....		375	1 00	1	½
Total, without cost of storage at Vicksburg			3 06		

It appears that if the roads were to take cotton at present steamboat prices, during good navigation, they must, in one case, carry it at the rate of 1 cent 3½ mills per ton each mile, and in the other be paid only twenty-five cents from Shreveport to Vicksburg, on each bale, or \$1 per ton, which would only be about 3⅞ mills per mile for each ton. The highest price here would be only about one-third of the average prices paid upon the New York roads.

In ordinary low water, when freights are doubled on the river, and come up to \$2 50 per bale, one road would obtain 2 cents 7½ mills per ton for each mile, and the other being paid \$1 50 from Shreveport to Vicksburg, on each bale, or \$6 per ton, would get 3 cents and 4 mills per ton for each mile, which is 1 cent and 3 mills less than our present rail-

road prices in this State, but nearly equal to northern prices. At \$3 06 per bale, which would allow \$2 06 from Shreveport to Vicksburg, or \$8 27 per ton, that road would receive the prices now paid upon the northern and western roads, provided there should be no charge for storage at Vicksburg, but even this is one-third more than the cost would be by the river after the necessary improvements should have been made.

It is probable that railroads could compete successfully with our highest low-water rates, unless the river were improved; but with the others I think they could not, unless freights could be carried upon them cheaper in Louisiana than in New York; which I consider exceedingly doubtful, as about half of the earnings of the latter comes from passengers, on which most of the profits are made, and which could not form a considerable item in this country. The following table, taken from the annual report of the State engineer and surveyor of New York, upon the subject of railroads, dated February 16, 1854, pages 76 and 77, will, I think, bear me out in this opinion:

Name of Corporation.	Receipts.			
	Passengers.	Freight.	Other sources.	Total.
Albany & Schenectady, for 10 months.	\$308,048 54	\$281,109 61	\$8,884 96	\$478,068 11
Buffalo, Corning, and New York	88,718 20	27,844 11	4,285 70	65,298 01
Buffalo and New York City	117,555 82	72,751 41	4,591 70	194,898 48
Buffalo and Niagara Falls	108,726 82	12,250 01	1,000 00	116,986 83
Buffalo and State Line	264,804 18	101,827 78	6,806 44	372,438 40
Buffalo and Rochester, for 10 months.	204,865 97	140,875 81	14,895 52	350,637 30
Cayuga and Susquehanna	24,828 83	49,226 02	27,022 12	100,781 97
Canandaigua and Elmira	53,726 98	60,124 81	2,988 89	116,840 68
Canandaigua and Niagara Falls	41,525 20	11,690 00	873 74	53,888 94
Hudson River	948,926 75	810,474 90	44,205 44	1,763,607 09
Long Island	159,539 95	64,846 12	104,996 73	329,382 80
New York and Erie	1,674,722 82	2,592,898 80	217,824 41	4,484,445 03
Northern	111,776 35	314,058 69	17,876 61	443,711 65
Oswego and Syracuse	55,629 80	22,458 14	4,475 49	82,563 43
Rensselaer and Saratoga	128,687 91	61,000 00	18,088 15	207,776 06
Rochester, Lockport, and Niagara Falls, 10 months	172,066 46	62,850 45	6,668 86	241,585 77
Rochester and Syracuse, for 10 months.	583,690 43	247,950 91	28,314 80	859,956 14
Saratoga and Washington	104,209 72	52,499 77	6,257 87	162,967 36
Sackett's Harbor and Ellisburg	2,888 10	1,124 43	.....	4,012 53
Schenectady and Troy, for 10 months.	27,816 54	46,395 05	1,152 82	75,364 41
Syracuse and Utica, for 10 months.	318,516 51	215,201 25	15,877 50	549,595 26
Troy and Boston	83,262 87	66,630 25	3,255 65	153,148 77
Troy and Greenbush	41,846 44	40,625 14	1,240 70	83,712 28
Utica and Schenectady, for 10 months.	491,685 59	411,811 43	57,752 71	961,249 73
Watertown and Rome	145,391 67	179,827 81	9,681 65	334,900 13
New York Central, for two months, embracing above numbers	720,671 85	858,008 14	.....	1,578,680 00
Total	6,799,958 82	5,890,638 10	602,298 46	13,292,895 38
New York Central, for 12 months	2,677,316 85	1,838,830 25	1,201,890 16	5,718,037 26
New York and Harlem	555,654 52	292,874 06	61,827 94	909,356 52

It is probably true that the first cost of construction is less in this country than in the north, but nearly all other expenses are greater here than there. Labor is higher, which is one reason for the greater cost of water transportation here than in New York; repairing machinery more expensive; the decay of timber much more rapid; so that the superstructure of our roads must be more often replaced than theirs. It may then be fair to presume that taking the whole costs of construction, repairs, and working the roads together, our costs would be the same as theirs, but we are then forced to put such a price upon freights as will remunerate us for the want of the profits which they make on passengers. This might bring our price of freights to four or five cents per ton per mile, and this would be low enough where there could be no competition with water.

I am unable to account for the heavy charges of the West Feliciana and Port Hudson railroads, the one fourteen and the other four times the cost of water transportation, but understand that it is in consequence of the great cost of keeping these roads in repair. The difference between the cost of transportation by these two roads and by the Mississippi river from their terminus to New Orleans is shown below :

	Cotton.	Miles.	Price paid.	Cost per mile per ton.		
				Cents.	Mills.	
West Feliciana railroad.....		28	\$1 75	28	1	Railroad.
Bayou Sara to New Orleans.....		165	75	2	.....	Water.
Port Hudson railroad.....		28	50	8	.....	Railroad.
Port Hudson to N. Orleans.....		158	75	2	1	Water.

But notwithstanding these enormous prices, these roads are doubtless a great public benefit; for by what other means could produce be transported in their precise locality at the same cost? No man hauls a ton one mile for eight cents; if they could they would not send by railroad. This is not intended as an argument against railroads, but only to prove that in this State, particularly, we must use water communication, whenever it is practicable to do so; and if the roads were made we should find it necessary to improve our streams, simply because our crops could be conveyed to market on them for so much less money than upon the roads. I am so far from being opposed to them that I would advocate their construction wherever water cannot be used as a means of transportation, as being the very best that can be provided by the art of man, and because the enhanced value of the

land through which they pass goes far to pay for their cost of construction. Any road running out from our water courses through our rich lands is a great public benefit; it has no competition with water, and can have no other which it cannot overcome; it brings the produce to the natural streams, for the least possible price at which it could be done, and they take it thence to market for less than half the price which the roads could do it for. Yet the road would not compete with the river nor the river with the road, but one creates a necessity for the good condition of the other. The road causes the back country to be settled up and highly cultivated, increasing the production, which makes it the more necessary that the stream which carries to market should be in good condition. It will be immediately conceded that this road has increased the population and production of the country through which it runs, and thereby rendered it the more important that the river should be in good condition below its terminus; but it can be clearly shown that if this road were continued from Bayou Bœuff to New Orleans, so as to make a complete line through from Alexandria, that it would create a competition from that place to the market between the water and the road, in which the water must come off victorious. Any road running west from Red river through the heart of Texas, will be of incalculable benefit, and I may say, almost regardless of cost of transportation, so that it be less than the cost by the present mode. There would be no competition with water until the produce reached Red river, but then, even if the road were continued, three-fourths of it would go by water to market. Any road connecting us with the great west, where our sugars are wanted, at a season of the year when they can only go through the eastern cities, and when we require western produce in exchange, which at times comes by the same route, will be of great advantage. It is thought by many that this State has lost at least two millions of dollars this season in consequence of the want of a market for sugars, and the high prices of produce resulting from the condition of the western rivers.

AGENCIES TO BE DEPENDED ON IN THE CONSTRUCTION OF INTERNAL IMPROVEMENTS, WITH REFERENCE TO TEXAS, BY A TEXAN—NO. 2.*

I would here close this communication were it not for some matters from abroad that may have an undeserved influence in preventing the early adoption of the State system in Texas. I allude to the sale of public works in other States. It is a

* Continued from last No. of Review.

matter of history that Michigan sold her railroads at 80 cents on the dollar of their cost. I have always been of opinion that it was unwise for that State to have sold its public works for even twice the present average value of corporate stocks, or but about 35 per cent. better than they stood one year ago. It would have been far better for that State to have retained its public works, and prosecuted its system in connexion with more carefully improved statesmanship, than to have stupidly given way to the speculating projects of some of her own citizens in connexion with others from abroad. How the scheme was laid and worked and managed to effect the measure is not for me to delineate, it is sufficient for me to know that speculation, more than patriotism, was at the bottom of it. I think a little history and analogical comparison will bring us all to the same conclusion.

By the last census report it appears that in 1853—

New York had of completed canals.....	989	miles.
“ “ “ railway.....	2,245	“
Pennsylvania had of completed canals.....	936	“
“ “ “ railway.....	1,464	“
Ohio had of completed canals.....	921	“
“ “ “ railway.....	2,367	“

The history of these canals and railways, comprising 10,200 miles of internal improvement, may afford the statesman and political economist of Texas the most ample source of instruction. It will be borne in mind that most of the canals in all these States, as well as some railways in Pennsylvania, belong to the respective States, and were constructed with means mostly, if not wholly, borrowed on the public credit. New York commenced her system in 1817, Pennsylvania a little later, and Ohio as soon as the Erie canal opened to that State the advantages of lake commerce.

Were we to resort to the executive messages of New York, Pennsylvania, and Ohio, with the accompanying documents, for the history, progress, and results of their respective State works, we should go to a source of information that would not deceive us. We should there see evidence of wisdom in statesmanship, not perfect in all its incidents, it is true, but in the main to such a degree as **THE WORLD HAS NEVER WITNESSED ELSEWHERE**. The rapid development of the agricultural, mineral, and mechanical resources of wealth, commerce, and population in those States astonished the political economists of Europe. This “statesmanship in the wilderness,” so called, received the encomiums of the wise men of the east, and gave to the north the appellation of “the great north.” “America,” says one, “seems a young and vigorous man, leading in the advance, whilst Europe, in its de-

crepitude, is slowly following on crutches." These works were the basis of accelerated prosperity. They are still found to be the main agency of its continuance. Take their business, patronage, tonnage, and comparative cost of transportation for the last current year, and they stand pre-eminent above all competition, as assistants to agriculture and commerce. These State works in the aggregate cost about one hundred and ten millions of dollars. Had the transportation upon them for the last year been charged with corporate prices, it would have nearly equalled, if not exceeded, the aggregate freight receipts on all the railways in the Union owned by companies, amounting to 20,000 miles, and constructed at a cost of six hundred millions of dollars. What, then, has wrought out this wonderful change in popular opinion, and seduced the unthinking multitude into an advocacy of the corporate system.

The corporate system of railways in the United States commenced its vigorous growth about the year 1838. In a few years it got into competition with the State works in its claim on the public for patronage. Its insidious and interested advocates in New York commenced at an early day their attacks on the State system. Taking advantage of the financial depression of 1841-'42, the seductive effort was commenced to influence the people of the State into a sale of their public works. The project had but a few advocates, but those, from incessant activity, were made to appear like many. Sufficient was attempted to alarm the public mind into forethought, and the corporators were answered by a clause in the constitution of 1846 to the effect that "the canals of the State should never be leased or sold, but remain the property of the State, and under its management forever."

The corporators, however, succeeded in gaining an exclusive footing in some of the western States. Michigan, Indiana, and Illinois, dazzled by the success of the State systems of New York, Pennsylvania, and Ohio, commenced at an early day the attempt at imitation. Disregarding every principle in the proper economy of adjustment, and heedless of adopting any adequate basis of finance, the two latter States rushed into undertakings which the oldest of the States would barely have been able to accomplish under the best regulated system. The embarrassment in finance consequent on such imprudence, in connexion with the impatience of the people at delay, enabled corporators to drive their projects with success, and thus obtain exclusive control of the transportation thoroughfares in those States. The dominion of corporate monopoly is established in all of them.

From 1842, onward, corporators have been sedulously and industriously at work, to get rid of the effect of State competition. They find themselves, however, with all their slanders and machinations, unable to stand against its effects. The Railroad Journal has been obliged, within the last six months, to withdraw the scheduled value of railway stocks from the public gaze. Sixty cents on the dollar, in present value, or forty per cent. average sacrifice is an aspect too alarming. It seems to have aroused some three hundred millions of invested capital (or rather the part of it not stolen) into a life and death struggle for existence. To such an extent has public opinion been manufactured, that the State works of Pennsylvania are already advertised for sale. In Ohio some of the papers are endeavoring to prepare the public mind for a similar project; and last of all, the State engineer and surveyor of New York, after enumerating a great number of fancied obstacles to the prosperity of the canals, uses the following language in his report: "*In my judgment, there is but one truly effective remedy, which is, the sale of the public works, in whole, or in part.*" Poor fellow! I gravely suspect, as the cow catcher in Texas would say, the corporators "have taken a turn on him." A little time since I published an extract from the Railroad Journal, by which it appears that these canals, constructed at an expense of less than forty millions, had transported six times as much during the last year as the three competing railroads, constructed at an outlay of about eighty-five millions. I also made, and published, a calculation based on comparative cost of transportation, by which it would appear that twelve and one quarter millions had been saved during the last year by the cheaper transportation on the State works. This report and conclusion of the state engineer is so at variance with that of his predecessor, (Mr. McAlpin,) for the year before, that a stranger would scarce know what to think from the disparity between the two. When I saw the conclusion of this report, set in capitals in the columns of the Journal of Commerce, and standing there unrebuked, I must confess to a sensation of disgust, such as I have seldom experienced. What will be the fate of the public works in the two former States, unprotected from sudden sale by any constitutional provision, is uncertain. Many incidents, however, connected with this struggle are certain. If corporators, always mercenary in prosperity and desperate in adversity, desire the interested advocacy of the press, they have the power to make it so. If they require interested legislators, cabinets, or governors, they have the power to make them so. Almost everything shows degeneracy before

railway financiering. Premiers, lords, and commons, are no more suffered to escape contamination than the needy politician. Few men have ever fully contemplated the political Jesuitism of this vast power; and fewer still have ventured on the attempt to grapple with its influence. There is but one arena, and one tribunal on earth where it is possible to check its overgrowth, and awe it into subjection, or even decency. *That tribunal is the people.*

As an humble individual, I have no compromise to make with the corporate system of improvements. Feeble in the comparison in its power to make progress; unavoidably corrupt, and corrupting in its influence; generally proceeding step by step on the platform of falsehood and deception; I find nothing to recommend it. However loud its advocates may be in sounding its praises as an instrument of public prosperity, after admitting all its merits, still I feel no respect for an agency that can, at best, give a people but fifty per cent. of what they can accomplish without it.

Should the State system of improvements ever be adopted in Texas, I hope the corporate system may never have a place by the side of it. The two are incompatible, and warfare between them in case of competition inevitable. It is nearly impossible to keep the public mind contented under the best system that ever existed, where a powerful and active influence is ever on the alert to poison it. There is one proposition that, if adopted, would afford a sovereign remedy against corporate imposition. Let us adopt a constitutional provision, making the stockholders in all corporations, created for business profit, personally responsible for the debts of the company; and we would have no more trouble from them than we should from mosquitoes and horse-flies, when the mercury stood at zero.

LORENZO SHERWOOD.

CANALS AND RAILWAYS.

These are not rivals; they are auxiliaries. Up to this time, canals have yielded the largest profit to their owners. In Great Britain there has been a fair trial of these modern commercial channels. Her canals average an annual income of over five per cent., while her railways yield but three six-tenths per cent. Railways have the great advantage in monopolizing the travel and the freight in articles of small weight and great value. Railway managers have sunk money by carrying freight below cost. This has been done, chiefly, to compete with water channels. It has also been, to

a great extent, with a view to show increased gross earnings. Great deceptions on stockholders have been practiced in this way.

I have compared the results of the freight business of sixteen of the principal railroads of New York and Massachusetts, eight in each State, having an aggregate length of 2,314 miles, and built and equipped at a cost of \$138,000,000, with the New York canals of 800 miles in length, and which I suppose have cost about \$40,000,000.

The freight carried, one mile, by sixteen railroads, last year, was, in tons - - - - 359,488,837.

The freight by the canals, carried one mile, during the season of navigation, last year, was 668,659,043.

Excess by the 800 miles of canal over the 2,300 miles of the sixteen railroads - - - 309,170,412.

The cost of carrying one ton per mile, on the canals, was eight mills, and on the railroads averaged nearly three cents. Some of these roads, according to their own showing, carried freight below cost; and every man conversant with the management of railroads in this country, a few years past, knows that this has been done in several instances, to the extent of sinking the whole capital of the roads.

The canals that have their lake termination in Toledo, need only to be well managed to become profitable to the owners as well as a rich blessing to the country through which they pass. In private hands, they would be so at once.

Yours,

J. W. SCOTT.

THE COAL FIELDS AND PRODUCTS OF THE OHIO VALLEY.

The coal trade is likely to increase so rapidly, and become so large an element of traffic, that it is worth while to look into the sources of supply and demand. The first that strikes us is the remarkable and most important fact, that the Ohio valley *contains (proportionally) the largest coal field in the world.*

1. What is the Ohio valley? The Ohio valley comprehends all that space of country penetrated and watered by the Ohio river and its tributaries. It comprehends Western Pennsylvania, Western Virginia, all of Ohio, Indiana, and Illinois, up to the narrow rim of the lakes, and the States of Kentucky and Tennessee. It comprehends a surface of about 230,000 square miles; and on that surface the coal basins, or in other words, the surface which is underlaid with coal is, according to the best authorities, as follows:

	Sq. miles surface.	Sq. miles coal surface.
Western Pennsylvania.....	20,000	10,000
Western Virginia.....	25,000	18,000
Ohio.....	35,000	10,000
Indiana.....	33,000	7,500
Illinois.....	40,000	35,000
Kentucky.....	40,000	13,500
Tennessee.....	40,000	5,000
Aggregate.....	233,000	99,000

The above surfaces are not those of the States named, but of that part in the valley of the Ohio. We see, then, the extraordinary fact, that more than *one-third the valley of the Ohio is underlaid with coal.*

Let us now look at what the production of coal is, in the Ohio valley, and *what it will be.* The present production of coal in the Ohio valley is, after careful investigation, supposed to be as follows:

	Bushels.
Consumption of Pittsburg for all purposes.....	22,300,000
Exported from Pittsburg.....	14,400,000
Consumption of Wheeling.....	2,000,000
Product of Pomeroy and vicinity.....	7,000,000
Received at Cleveland from Ohio mines.....	3,000,000
Product of Nelsonville.....	1,200,000
Product of other places in Ohio.....	3,000,000
Product of Kentucky.....	2,000,000
Product of Indiana.....	1,500,000
Product of Illinois.....	1,000,000
Product of Tennessee.....	1,000,000
Aggregate.....	58,400,000

In round numbers, we produce *sixty millions of bushels* of bituminous coal in the valley of the Ohio. But what is that in comparison with the consumption in other countries, and compared with what it will be! Let us look at the ratio of consumption in other countries, and compare it with our own.

	Ratio.
Great Britain - - - - -	34 to 1
France - - - - -	3 to 1
Belgium - - - - -	25 to 1
Prusia - - - - -	$\frac{1}{2}$ to 1
United States - - - - -	$9\frac{1}{2}$ to 1
Ohio valley - - - - -	10 to 1

This shows that the consumption of coal in the Ohio valley now is not more than *one-third in proportion* to that of France, England or Belgium.

This is owing to the cheapness of wood and the want of capital to develop the mines. But these obstacles are rapidly passing away. Wood is becoming dear in the commercial towns, and capital is fast learning that mining is a profitable

business. It is quite obvious that the time is not far off in which the *proportion* of coal consumed will be quite as high in the States of Ohio valley as in Belgium. Besides this, it must increase likewise with the increase of population. Combining these, so as to advance the *ratio*, in the proportion of the increased population for the next thirty years, and we have the increase of coal consumed as follows, viz :

	Population.	Ratio.	Con. of coal.
In 1850.....	5,000,000	10	60,000,000
In 1860.....	8,000,000	13	104,000,000
In 1870.....	10,600,000	17	180,000,000
In 1880.....	14,200,000	23	326,000,000

This will probably be much below the results ; for the rapid increase of manufacture, consequent on the opening of the central western mines of coal, iron, copper, zinc and lead, will increase population at a more rapid rate than is above stated ; and the same cause will also increase more rapidly the *ratio* of consumption to population.—*Railroad Rec.*

THE HIRELING AND THE SLAVE.

Some months ago we published an extract from the able poem of William J. Grayson, of South Carolina, entitled "The Hireling and the Slave."

Having lately obtained the work complete from John Russell, of Charleston, we are disposed to add another extract, and will also incorporate the preface as of general interest to our readers :

The malignant abuse lavished on the slaveholders of America, by writers in this country and England, can be accounted for but in one way, consistently with any degree of charitable consideration for the slanderers. They have no knowledge of the thing abused. They substitute an ideal of their own contriving for the reality. They regard slavery as a system of chains, whips and tortures. They consider its abuses as its necessary condition, and a cruel master its fair representative. Mr. Clarkson took up the subject, originally, as a fit one for a college exercise in rhetoric, and it became a rhetorical exercise for life to himself and his followers. With these people the cruelty of slavery is an affair of tropes and figures only. They have shown as little regard for truth, fairness and common sense, as they would do to gather all the atrocities of their own country committed by husbands and wives, parents and children, masters and servants, priest and people, and denounce these several relations in life in consequence of their abuses.

The laborer suffers wrong, abuse and cruelty in England, but, they say, it is against the law, against public opinion ; he may apply to the courts for redress ; these are open to him. Cruelty to the slave is equally against the law. It is

equally condemned by public opinion ; and as to the courts of law being open to the pauper hireling, we may remember the reply of Sheridan to a similar remark,—yes, and so are the London hotels—justice and a good dinner, with champagne, are equally within his reach. If, in consequence of the evils incident to hireling labor—because there are severe, heartless, grinding employers and miserable starving hirelings, it were proposed to abolish hireling labor, it would be quite as just and logical as the argument to abolish slavery because there are sufferings among slaves, and hard hearts among masters. The cruelty or suffering is no more a necessary part of the one system than of the other. Notwithstanding its abuses and miseries, the hireling system works beneficially with white laborers ; and so also, notwithstanding hard masters, slavery, among a Christian people, is advantageous to the negro. To attempt to establish the hireling system with Africans, would be as wise as to endeavor to bestow the constitutional government of England on Ashantee or Dahomey. In both cases there would be an equal amount of abstract truth and practical absurdity.

Slavery is that system of labor which exchanges subsistence for work, which secures a life-maintenance from the master to the slave, and gives a life-labor from the slave to the master. The slave is an apprentice for life, and owes his labor to his master ; the master owes support, during life, to the slave. Slavery is the negro system of labor. He is lazy and improvident. Slavery makes all work, and it ensures homes, food and clothing for all. It permits no idleness, and it provides for sickness, infancy and old age. It allows no tramping or skulking, and it knows no pauperism.

This is the whole system substantially. All cruelty is an abuse ; does not belong to the institution ; is now punished and may be in time prevented. The abuses of slavery are as open to all reforming influences as those of any other civil, social, or political condition. The improvement in the treatment of the slave is as marked as in that of any other laboring class in the world. If it be true of the English soldier or sailor, that his condition has been ameliorated in the last fifty years, it is quite as true of the negro.

If slavery is subject to abuses, it has its advantages also. It establishes more permanent and, therefore, kinder relations between capital and labor. It removes what Stuart Mill calls “the widening and embittering feud between the class of labor and the class of capital.” It draws the relation closer between master and servant. There is no such thing, with slavery, as a laborer for whom nobody cares or

provides. The most wretched feature, in hireling labor, is the isolated miserable creature who has no home, no work, no food, and in whom no one is particularly interested. *This is seen among hirelings only.*

I do not say that slavery is the best system of labor, but only that it is the best, for the negro, in this country. In a nation composed of the same race or similar races, where the laborer is intelligent, industrious and provident, money wages may be better than subsistence. Even under all advantages, there are great defects in the hireling labor system, for which, hitherto, no statesman has discovered an adequate remedy. In hireling States there are thousands of idlers, trampers, poachers, smugglers, drunkards, and thieves, who make theft a profession. There are thousands who suffer for want of food and clothing, from inability to obtain them. For these two classes—those who will not work and those who cannot—there is no provision. Among slaves there are no trampers, idlers, smugglers, poachers, and none suffer from want. Every one is made to work, and no one is permitted to starve. Slavery does for the negro what European schemers in vain attempt to do for the hireling. It secures work and subsistence for all. It secures more order and subordination also.* The master is a commissioner of the poor, on every plantation, to provide food, clothing, medicine, houses, for his people. He is a police officer, to prevent idleness, drunkenness, theft, or disorder. I do not mean by formal appointment of law, but by virtue of his relation to his slaves. There is, therefore, no starvation among slaves; there are, comparatively, few crimes. If there are paupers in slave States, they are the hirelings of other countries, who have run away from their homes. Pauperism began, with them, when serfage was abolished.

But you must confess, it is said, that slavery is an evil. True enough, in the same sense in which the hireling's hard labor is an evil. But the poet tells us that there are worse things in the world than hard labor, "withouten that would come a heavier bale;" and so there are worse things for the negro than slavery in a Christian land. Archbishop Hughes, in his late visit to Cuba, asked the Africans if they wished to return to their native country; the answer was always *no*. If the African is happier here than in his own country, can we say that for him the establishment of slavery is an evil?

* One of the best arrangements for the relief of the hireling laborer is the provision made in France, of houses where the children of laborers are taken in when the laborers go to work in the morning, are carefully attended during the day, and restored to the parents on their return at night—a similar provision for the care of children is found on every plantation.

If the master is contented with his part in the system, with what reason can we regard it as an evil, so far as he is concerned? Slaves and masters are equally satisfied. The discontented are those who are neither.

What more can be required of slavery, in reference to the negro, than has been done? It has made him, from a savage, an orderly and efficient laborer. It supports him in comfort and peace. It restrains his vices. It improves his mind, morals and manners. It instructs him in Christian knowledge.

But the quarrel is with the master, and the design is to calumniate and injure him. And why this attack on the master? Who, among its pretended friends, will dare to say that they have done for the African race what the slaveholders of North America have done, and are doing? What abolitionist has bestowed on the negro the same enduring patience, the same useful education, the same care and attendance? Who, among them, has done, or given, or sacrificed as much? Under the master's care, the miserable black savage has been fed, clothed, instructed in useful arts, and made an important contributor to the business and enjoyments of the world. What have the abolitionists done, what have they given, for the negro race? They use the slave for the purposes of self-glorification only, indifferent about his present or future condition. They are ambitious to bring about a great social revolution—what its effects may be they do not care to inquire.

All Christians believe that the affairs of the world are directed by Providence for wise and good purposes. The coming of the negro to North America makes no exception to the rule. His transportation was a rude mode of emigration; the only practicable one in his case; not attended with more wretchedness than the emigrant ship often exhibits even now, notwithstanding the passenger law. What the purpose of his coming is, we may not presume to judge. But we can see much good already resulting from it—good to the negro, in his improved condition; to the country whose rich fields he has cleared of the forest and made productive in climates unfit for the labour of the white man; to the continent of Africa in furnishing, as it may ultimately, the only means for civilizing its people.

The end of slavery then would seem to be, present good to the slave himself, to the country in which he labours and the world at large, and future good to his race. Whether Mr. Clarkson or Lord Carlisle approve or disapprove of the mode in which it has pleased divine Providence to bring all

this about, the event will probably be the same. It may be doubted whether these gentlemen and their friends could have administered the affairs of the world more wisely, whatever our opinion may be of their wisdom or benevolence. As they will never have the power to try, this must remain among the other unsettled questions that perplex the ingenuity of mankind.

There is, however, a plain, practicable mode in which these anti-slavery zealots may confer freedom on thousands, year after year, without offence to any party. The plan is simple and easy. Let them show their sympathy for the negro, not by eloquent speeches, but more eloquent acts; not with sentiment, but with sovereigns. They can buy any number of negroes and carry them where they please. For such a purpose their government would not object. Efficient laborers are wanted in the West Indies. Here is a ready way to procure them. They may, in this manner, bestow freedom on many of the slaves of America, confer a benefit on their colonies, and gratify their own excited sensibilities with something more than unprofitable words. They feel profoundly for the negro, let them feel to the amount of a million a year. This would be better than bringing coolies from Asia, and negroes from Africa, by a system of very doubtful character. It would convince the world that their sympathy is an honest one, and not the offspring of vanity or arrogance.

An ingenious lady of South Carolina, in a very admirable letter, has made a similar proposal to the Duchess of Sutherland. But her grace is a near relation of the priest, in the fable, who refused a half crown to a supplicant, but was ready enough to give him a blessing. The abolitionists all belong to this benevolent class of world-menders, who are willing, at all times, to help everybody, if it cost them no more than pretty phrases.

In the remarks made in reference to the condition of the hireling in Europe—of England especially—I have no feeling but compassion for the unfortunate paupers, and intend no reproach to their country. I venerate England as the great mother of nations, as our teacher in law, literature, civil and political liberty. The facts relating to the poverty, vice, brutality, and ignorance of the British laborer are taken, as may be seen in the notes attached, from English authorities—they can be multiplied a hundred fold. In advertent to them, I have merely desired to show that there is a poor and suffering class in all countries—the richest and most civilized not excepted—laborers who get their daily

bread by daily work, and that the slave is as well provided for as any other. The poor we shall have with us always, and whether the poor hireling or the poor slave is most the object of pity, or subject of distress, is the only question proposed, and the true one at issue.

In comparing their several conditions no contempt is implied, certainly none intended, for the situation of the hireling poor. All honest labor is worth of honor—that of the faithful slave not less so than any other. Moralists are accustomed to weigh the advantages and evils of the highest and lowest, the palace and cottage—what forbids us to do so with the good and ill of the two humblest stations of civilized life?

It may be thought unnecessary to invite public attention again to the subject of slavery. But if the subject be trite, it is also of incalculable and unceasing interest. I have endeavored to diversify the mode, if not the matter, of the argument, by throwing the remarks offered into verse. I have done so, not only for the reason assigned, but with the additional purpose of offering some variety to the poetic forms that are almost universally prevalent. The poetry of the day is, for the most part, subtle and transcendental in its character. Every sentiment, reflection, or description is wrought into elaborate modes of expression, from remote and fanciful analogies. The responses of the muses have become as mystical, and sometimes as obscure, as those of more ancient oracles, and disdain the older and homelier forms of English verse.

It has occurred to me that a return to the more sober style of an earlier period may not be an unreasonable experiment on the public taste. The fashion in dress and furniture, now and then, goes back a century or two, why not the fashion in verse? The school of Dryden and Pope is not entirely forgotten. May we not imitate the poetry of Queen Anne's time as well as the tables and chairs? The common measure of that period, applied to a didactic subject, may diversify the dishes presented to the public and provide for its appetite the same kind of relief that bread and butter or beef and pudding would offer after a long indulgence in more refined and elaborate dishes. The most fastidious appetite may tolerate an occasional change of diet, and exchange dainties for plainer fare.

THE INDIAN AND THE SLAVE---THE PARALLEL, ETC

To other griefs that changeful life supplies,
 Griefs of a race, awakened Memory flies,
 And backward as she turns her thoughtful view,
 The vanished Indian seems to live anew ;
 Low voices whisper round from stream and bay,
 The mournful tale of nations passed away ;
 And names, like spirits of the buried race,
 Of plaintive sweetness, tell their dwelling place ;
 On every isle, in every field and wood,
 Shells show, in heaps, where once the wigwam stood ;
 Spear points of flint and arrow heads are found,
 Fragments of pottery strew the haunted ground,
 And barrows broad, with ancient trees o'erspread,
 Still hold the relics of the warrior dead—
 Relics of tribes and nations that of yore
 Welcomed the Saxon stranger to the shore ;
 Then masters of the land, with matchless skill,
 They chased the deer, by valley, plain and hill,
 Through gloomy forests sought a nobler game,
 And won, with pride, the warrior's sterner fame ;
 Where moose and elk, their fragrant forest home
 In wastes of fir by Madawaska roam ;
 Where, on his breast, Potomac loves to trace
 The Patriot's home and hallowed resting-place ;
 In quiet beauty, where Saluda flows ;
 Catawba rushes from his mountain snows ;
 Through the lost Eden of the Cherokee,
 Where Tallapoosa seeks the Southern sea ;
 Where slow Oscilla winds his gentler tides,
 By cypress shadow where Suwannee glides ;
 Where, crowned with woods, the Apalachians rise,
 The Blue Ridge blends its summit with the skies,
 Long rolling waves break foaming from the deep,
 And Erie's ocean thunders down the steep ;
 Lords of the lake, the shore, the stream, the wood,
 Painted and plumed, the giant warriors stood,
 With presents filled the feeble stranger's hand,
 And hailed his coming to the red man's land ;
 Now from these homes expelled, in seeming rest,
 A hopeless remnant, cowering in the west,
 They linger till the surge of millions come
 To sweep them headlong from their transient home :
 Vainly the gentle wish, the gen'rous strive
 To save the helpless wanderers that survive,
 Lure them from sloth, from ignorance and strife,
 And make them learn the social arts of life ;
 In vain, with adverse will, the Indian tries
 To win the bread that toil or art supplies,
 Like their wild woods, before the Saxon's sway,
 The native nations wither and decay ;
 The same their doom, where wars the forest sweep,
 Like winter torrents rushing to the deep,
 Or where the tides of peace more slowly eat
 As sure a passage to their last retreat ;
 Where'er their lot, with Puritan or Friend,
 Friendship and hatred bring one common end ;
 Chieftain and brave have vanished from the scene,
 And Memory hardly tells that they have been.
 Such, too, the fate the negro must deplore,
 If slavery guard his subject race no more,
 If by weak friends or vicious counsels led
 To change his blessings for the hireling's bread.

Cheated by idle hopes, he vainly tries
 To tempt the fortune that his strength denies,
 Quits the safe port, deserts the peaceful shore,
 An unknown sea of peril to explore ;
 Hard the long toil the hireling bread to gain,
 Slight is his power life's battle to maintain ;
 And war's swift sword, or peace, with slow decay,
 Must, like the Indian, sweep his race away.

Swift is the doom, where temperate climes invite
 To fruitful soils the labors of the white ;
 Where no foul vapour taints the morning air,
 And bracing frosts, his wasted strength repair ;
 Where Europe's hordes, from home and hunger fled,
 Task every nerve and ready art for bread,
 Rush to each work, the calls for labor yield,
 And bear no sable brother in the field ;
 There in suburban dens and human sties,
 In foul excesses sunk, the negro lies ;
 A moral pestilence to taint and stain,
 His life a curse, his death a social gain ;
 Debased, despised, the Northern Pariah knows
 He shares no good that liberty bestows ;
 Spurned from her gifts, with each successive year,
 In drunken want, his numbers disappear.

In tropic climes, where Nature's bounteous hand
 Pours ceaseless blessings on the teeming land,
 And with the fruits and flowers that she bestows,
 Fierce fevers lurk, the white man's deadliest foes,
 More safe the negro seems—his sluggish race
 Luxuriates in the hot congenial place—
 A Lotus bearing paradise, that flows
 With all the lazy joys the negro knows ;
 Where all day long beneath the Tamarisk shade,
 Stretched on his back in scanty garb arrayed,
 With sated appetite, in sensual ease,
 Fanned into slumber by the listless breeze,
 A careless life of indolence he lives,
 Fed by the fruits perpetual summer gives :
 Yet here, unguided by Caucasian skill,
 Unurged to labor by a master will,
 Abandoned to his native sloth that knows
 No state so blest as undisturbed repose,
 With no restraint, that struggling virtue needs,
 With every vice, that lazy pleasure breeds,
 His life, to savage indolence he yields,
 To weeds and jungle, the deserted fields ;
 Where once the mansion rose, the garden smiled,
 Where art and labor tamed the tropic wild,
 Their hard wrought trophies sink into decay,
 The wilderness again resumes its sway,
 Rank weeds displace the labors of the spade,
 And reptiles crawl where joyous infants played.

Such now the negro's life, such wrecks appear
 Of former affluence, industry, and care,
 On Hayti's plains, where once her golden stores
 Gave their best commerce to the Gallic shores ;
 While yet no foul revolt or servile strife
 Marred the calm tenor of the negro's life,
 And lured his mind—with mimicry elate
 Of titled nobles and imperial state—
 From useful labor savage wars to wage,
 To glut with massacre a demon's rage,
 Forget the Christian in the pagan rite,
 And serve a negro master for a white.

But even in climes like this, a fated power,
 In patient ambush, waits the coming hour,
 When from their hovels war and want shall drive
 New hordes of hunger from the swarming hive,
 And Europe's multitudes again demand
 Its boundless riches from the willing land
 That now, in vain luxuriance, idly lies,
 And yields no harvests to the genial skies;
 Then shall the Ape of Empire meet its doom,
 Black peer and prince their ancient tasks resume,
 Renounce the mimicries of war and state,
 And useful labor strive to emulate,

Why peril then the negro's humble joys,
 Why make him free, if freedom but destroys?
 Why take him from that lot that now bestows
 More than the negro elsewhere ever knows—
 Home, clothing, food, light labor, and content,
 Childhood in play, and age, in quiet spent,
 To vex his life with factious strife and broil,
 To crush his nature with unwonted toil,
 To see him, like the Indian tribes, a prey
 To war or peace, destruction or decay?

Not such his fate, Philanthropy replies,
 His horoscope is drawn from happier skies;
 Bonds soon shall cease to be the negro's lot,
 Mere race distinctions shall be all forgot,
 And white and black amalgamating, prove
 The charms, that Stone admires, of mongrel love;
 Erase the lines that erring nature draws
 To sever races, and rescind her laws;
 Reverse the rule that stupid farmers heed,
 And mend the higher by the coarser breed;
 Or prove the world's long history false, and find
 Wit, wisdom, genius in the negro mind;
 If not intended thus, in time, to blend
 In one bronze colored breed—what then the end?
 What purposed good, like that which brought before
 The Hebrew seer to Nile's mysterious shore,
 Brings the dusk children of the burning zone
 To toil in fields and forests not their own?

They come where summer suns intensely blaze,
 And Celt and Saxon shun the fatal rays;
 Where gay savannas bloom, wild forests rise,
 And prairies spread beneath unwholesome skies;
 Where Mississippi's broad alluvial lands
 Demand the labor of unnumbered hands,
 With promised gifts, from endless hill and vale,
 From fields whose riches mock the traveller's tale
 Where nature blossoms in her tropic pride,
 All bounties given, but health alone denied;
 They come to cleave the forest from the plain,
 From the rank soil to rear the golden grain,
 The wealth of hill and valley to disclose,
 Make the wild desert blossom as the rose,
 To all the world unwonted blessings give,
 The naked clothe, and bid the starving live;
 Where Amazon's imperial valley lies
 Untamed and basking under tropic skies
 They come, his secret treasures to unfold—
 Spices, and silks, and gems, and countless gold;
 For fields of cane, his matted woods displace,
 For flocks and herds exchange the reptile race
 With tower and city crown the ocean stream,
 And make his valley one Arcadian dream.

Slaves of the plough—when duly tasked they bring,
 Like the swart genii of the lamp and ring,
 Their priceless gifts—their labors yield in time,
 Unbounded blessings to their native clime ;
 Though round it, darkly, clouds and mists have rolled
 Of sloth and ignorance, for years untold ;
 Still, in the future, faith's prophetic eye,
 Beyond the cloud, discerns the promised sky ;
 See happier lands their sable thousands pour,
 Missions of love, on Congo's suppliant shore,
 Skilled in each useful civilizing art,
 With all the power that knowledge can impart,
 O'er the wild deep, whose heaving billows seem
 Bridged for their passage by assisting steam,
 To Africa, their fatherland, they go,
 Law, industry, instruction, to bestow ;
 To pour, from western skies, religious light,
 Drive from each hill or vale its pagan rite,
 Teach brutal hordes a nobler life to plan,
 And change, at last, the savage to the man.

Exulting millions, through their native land,
 From Gambia's river, to Angola's strand,
 Where Niger's fountain head the traveller shuns,
 And mountain snows are bright with tropic suns,
 See spreading inward from the Atlantic shore,
 Industrial skill and arts unknown before ;
 Through their broad vallies populous cities rise,
 With gilded domes, and spires that court the skies,
 Forests, for countless years the tiger's lair,
 Yield their glad acres to the shining shear ;
 Where once, along the interminable plain,
 The weary traveller dragged his steps with pain,
 In iron lines continuous roads proceed,
 And steam outstrips the ostrich in its speed ;
 Timbuctoo's towers and fabled walls, that seem
 The fabric only of a traveller's dream,
 Spread a broad mart, where commerce brings her stores,
 Of gems and gold, from earth's remotest shores ;
 Wealth, art, refinement, follow in her train,
 Learning applauds a new Augustan reign,
 To tropic suns her fruits and flowers unfold,
 And Lybia hails, at last, her age of gold.

For these great ends hath Heaven's supreme command
 Brought the black savage from his native land,
 Trains for each purpose his barbarian mind,
 By slavery tamed, enlightened, and refined ;
 Instructs him from a master race to draw
 Wise modes of polity and forms of law,
 Imbues his soul with faith, his heart with love,
 Shapes all his life by dictates from above,
 And, to a grateful world, resolves at last
 The puzzling question of all ages past,
 Revealing to the Christian's gladdened eyes,
 How gospel light may dawn from Lybia's skies,
 Disperse the mists that darken and deprave,
 And shine with power to civilize and save.

Let then the master still his course pursue,
 "With heart and hope" perform his mission too ;
 Heaven's ruling power confest, with patient care,
 The end subserve, the fitting means prepare,
 In faith unshaken, guide, restrain, command,
 With strong and steady, yet indulgent hand,
 Justly, "as in the great Taskmaster's eye,"
 His task perform—the negro's wants supply ;

The negro's hand to useful arts incline,
 His mind enlarge, his moral sense refine ;
 With gospel truth his simple heart engage,
 To his dull eyes unseal its sacred page,
 By gradual steps, his feebler nature raise,
 Deserve, if not receive, the good man's praise ;
 The factious knave defy, and meddling fool,
 The pulpit brawler and his lawless tool,
 Scorn the grave cant, the supercilious sneer,
 The mawkish sentiment, and maudlin tear ;
 Assured that God all human power bestows,
 Controls its uses, and its purpose knows,
 And that each lot on earth to mortals given,
 Its duties duly done, is blest of Heaven.

 UNIVERSITY OF VIRGINIA.

The prosperity of this institution, says the *Southern Times*, is one of the most gratifying instances of southern progress. It has risen rapidly, within a few years past, in public favor as well as State estimation, and we doubt if it has now, all things considered, its superior in the country. Located in one of the finest sections of the land, where the natural and social advantages are unsurpassed, it has now become one of the most prominent and valuable schools within reach of southern young men. We have been pleased to note in several northern papers a recognition of the unusual merits of this institution, and especially their appreciation of its moral advantages. Few schools can compare with it in this particular. Of late years, a large proportion of the students have been young men of decided moral or religious character. Reliable men have informed us, that the best social influences prevail in the institution and that the deportment of the students is much above that of most of our colleges.

We give an extract from a long article about the University in a leading New York journal :

Of the 466 students attending the university, you will observe that a little less than *two-thirds* are from Virginia, and that of other States, South Carolina and Alabama are the largest contributors. This, I observe, was also the case in '51-'2, and '52-'3.

The impression used to exist—and still exists to some extent—that an *irreligious influence* was exercised at the university. And it is only within a few years that a professor from a southern college received from me, with great apparent incredulity, the statement that there was nothing at the university of the irregularity, or violence, or disorder which he seemed to think prevailed there. He seemed to have an impression that shooting the professors was a very frequent event, and that mobs and insurrections occurred as often as in Mexico. I think I may safely say, that I doubt if so much good order prevails at the great majority of colleges in the Union as is found at the university. With four or five hundred students—all living almost *en masse*—one-third of them from the extreme south and far from home—coming to Virginia rather through form than (in general) with the idea of studying—any disturbance at this institution is the rarest thing. Not only is any act of violence uncommon, but in the adjoining village—which in the way of noise and nocturnal uproar, lies at their mercy—any noise in the streets is extremely unfrequent.

AGRICULTURAL AND HORTICULTURAL JOURNAL.

GUANO.

BY CHARLES COLBY.

The present annual importation of guano into the United States amounts in value to about \$10,000,000. This article has become one of general use by farmers and gardeners. Since its character as a most valuable fertilizer has become firmly established, various attempts have been made to manufacture compounds of similar properties; and we think that the impression widely prevails that these artificial products have also proved themselves to be capable of regenerating worn-out land, or at least improving it. This has been the case only to a limited extent. Many farmers who have tried these "fertilizers" have abandoned them, and now use guano in addition to ordinary manure. We learn from the best authority that the annual consumption of Peruvian guano alone is three times as great as the aggregate consumption of all kinds of manufactured fertilizers, some of which are undoubtedly valuable, but none can supersede guano.

The word "guano" is a corruption of the Spanish "huano," itself a corruption of the Peruvian word "huanu;" signifying excrement. It was used as a manure in the time of the Incas, and the Spaniards learned its use from the Peruvians. The chief source from which the article now in commerce is taken is the Chincha Islands, off Peru. There, immense deposits have been formed through many centuries by countless flocks of seabirds, which still frequent the islands, but not in such numbers as formerly—the great concourse of ships having driven most of them away. These deposits are regularly stratified, and are of a dark reddish color, but lighter on the surface. Under the sun-baked crust of the surface the birds scratch deep oblique holes in which they lay their eggs, so that the upper layer thus has a completely honey-combed appearance. Guano also contains decomposed egg-shells, and the bones and remains of fish, brought by the old birds to their young. The Chincha article is considered the best on account of its extreme dryness, as the rain never falls upon those islands. But there are many other localities whence guano is or may be obtained. Such are the islands directly south of the Chinchas, Battista and San Gallen; the Lobos islands; various points along the coasts of South America and Mexico; the Triangle Island, near Yucatan; Bird Island, west of Gaudaloupe; different parts of Africa, &c.

The Chinchas are a group of three islands in the Bay of Pisco, on the coast of Peru, much alike in their general formation and appearance, lying nearly north and south, and separated by channels about one mile in breadth. They are naturally bare rocks, without a sign of vegetation of any sort. The northern island is somewhat the largest of the three, which average two miles in circumference. Each presents the appearance of a flattened cone, the rocky inequalities of the original surface having been filled up and covered with the guano, the cuttings of which vary in depth from a few inches to a hundred feet. Their upper surfaces are from 100 to 150 feet above the water. Around their bases little promontories jut out, in which the washing of the sea has formed many caverns—the resort of sea-lions; and whales are frequently seen gamboling about the islands. The eastern side of each is a perpendicular wall of rock, from the edge of which the guano slopes toward the centre of the island, which is a rocky elevation; and from this point there is a gentle slope to the western shore, the guano continuing

to within a few feet of the water. The steepness of the cliffs that form the shore and the great depth of water (seven fathoms close in) afford great facilities for loading vessels.

The mode of loading is usually as follows: A ship first takes in by her boats enough guano to ballast her, and approaches to a point of the coast where the remainder of the cargo is shot down the cliff into the hold of the vessel. Some vessels (chiefly the smaller ones) load entirely from boats. On the top of the cliff are deep bins containing from 100 to 500 tons of guano, made of long poles firmly bound together and interwoven with ropes and chains. These are wide and open at the top, but diminishing in size toward their lower end, which is on the extreme edge of the precipice. To this is fitted a canvass chute or pipe, two feet in diameter, which extends down 100 feet to the deck of the ship. Through this chute the guano passes in a continuous stream of tremendous force, at the rate of from 100 to 400 tons per day. The bin is filled by Chinese coolies and the Peruvian convicts. A year since there were about 300 of the former, but their number was then rapidly diminishing by ill treatment. Each man is compelled to bring to the chute five tons daily, and if he fails to do so he is punished by negro drivers with the whip. The barbarity used towards these coolies, who were enslaved by treachery, is almost unparalleled. There are about 100 of the convicts.

It is only about twelve years since these deposits became of commercial importance; and in this period they have proved a source of great wealth to the government of Peru, which is now the most prosperous of all the South American republics. The amount of its revenue from this source for 1854 and 1855, as stated in the last Treasury Budget, is estimated at \$8,600,000. It sells the privilege of loading vessels for about \$19 a ton. There are frequently over one hundred vessels engaged in loading at the same time, and as each vessel receives but one "measure" at its "turn," the period occupied in loading is several weeks. The following is the official report of the total amount of deposits on these islands. In the fall of 1853 the Peruvian government employed a corps of engineers, headed by Mr. Charles Paraguet, to measure their areas; and their reports were printed in London, with lithographic illustrations. Of this return we have this summary:

	Tons of measurement.
On the northern island	4,189,477
On the middle island.....	2,518,948
On the southern island.....	5,689,675
Total.....	12,376,100

This is to be increased one-third as the difference made by breaking it up and forming tons of weight, as shipped, or in all 16,501,466 tons. This is probably a correct estimate, and shows that previous estimates were too large.

The total quantity exported is not definitely known. The greatest quantity has been taken from the northern island; the middle island has been moderately worked; and the southern island which is the most difficult of access, has scarcely been touched. The following is a semi-official statement of the exports in three years:

	1850.	1851.	1852.
To England, tons.....	102,421	150,653	160,000
To the United States, tons.....	14,250	38,371	32,000
To France, &c., tons.....	1,681	.....	28,500
Total.....	118,352	169,024	220,500

Since 1852 our trade in the article has become equal to that of England, and is likely to exceed it hereafter.

The whole amount of guano imported into England from 1841 to 1852, both

inclusive, was 1,258,107 tons, as shown by the following statement, in which the imports from Peru are separately given :

Year.	From Peru.	Other countries.	Total.
1841.....	The statistical details of these years are not at hand.		2,861
1842.....			20,398
1843.....			30,002
1844.....			104,251
1841-'4.....			157,532
1845.....	14,450	268,850	283,300
1846.....	22,410	66,793	89,203
1847.....	57,782	25,630	83,399
1848.....	61,055	10,359	71,414
1849.....	73,567	9,871	83,438
1850.....	95,083	21,842	116,925
1851.....	199,732	43,282	243,014
1852.....	86,293	43,596	129,880
1845-'52.....	610,352	490,223	1,100,575
Total importation 1841-'52.....			1,258,107

For the year 1849 we have the particular statement of the several countries from which importations were made, as follows :

Name of countries.	Tons.	Name of countries.	Tons.
Africa, West Coast.....	2,345	Patagonia.....	1,945
Africa, East Coast.....	1	Chili.....	4,311
Cape of Good Hope.....	767	Peru and Bolivia.....	73,567
Norway.....	25		
France.....	477	Total tons.....	83,438

The following table presents the guano trade of the United States for the last six fiscal years, each ending 30th June :

Years.	Total Imports.	Total Exports.	Home consumption.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1848-'49.....	21,243	3	21,240
1849-'50.....	11,740	4	11,736
1850-'51.....	97,881	1,128	96,753
1851-'52.....	50,054	430	49,624
1852-'53.....	38,034	348	37,686
1853-'54.....	175,849	386	175,463
1848-'54.....	394,801	2,299	392,502
Yearly average.....	65,800	383	65,417

The countries from which the principal importations were made during the last three fiscal years were :

Name of countries.	1851-'52.	1852-'53.	1853-'54.	Total.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Peru.....	39,567	25,852	163,662	229,081
Chili.....	1,710	2,134	.....	3,844
Buenos Ayres, &c.....	220	.....	60	280
Uruguay.....	1,345	320	.....	1,665
Brazil.....	1,928	708	798	3,434
South America generally.....	4,281	1,530	.....	5,811
New Granada.....	.....	200	4,487	4,687
British North America.....	577	6,876	.....	7,453
Africa.....	.....	148	502	650

Next to this city, Baltimore is the chief place of guano importation, which for 1854 (calendar year) amounted there to 60,000 tons, valued at \$3,000,000. The present price of \$50 a ton has been constant for a year. In January, 1854, it was \$41, but by subsequent rises of \$4 in February and \$5 in May, it attained its present rate. So far the demand has been rather greater than the supply. Last year the supply was quite inadequate.

Large deposits of guano are found on many of the rocky islands along the coasts of South and Central America, and elsewhere, and on the coasts themselves. The value chiefly depends on the dryness of the locality. For this quality, that of the Chincha islands has not yet found a competitor. Very positive statements have been made in regard to the virtue of some other kinds of guano, but have not resulted in bringing them into general use.

The Galapagos Islands lie in the Pacific Ocean, directly on the equator, and some 650 miles west of Ecuador, South America. These numerous islands are frequented by myriads of aquatic birds, and their shores abound in tortoises. A sample of the guano derived from the former has lately been analyzed by an eminent chemist, who pronounces it equal to the best Peruvian, as it contained 15.59 per cent. of ammonia.

Of the Mexican guano, 5,590 tons were imported into the United States in the year ending June 30, 1854; and a much larger amount was sent to England. A year or more since, the Mexican government granted to a company the exclusive exportation of all that belonged to Mexico, except that on the "Three Marias" islands on the Pacific side, which is particularly abundant. On the eastern coast, the chief islands of this character are the "Triangles," near the coast of Yucatan, from which several American vessels obtained cargoes before the locality was known to the Mexican government. Whether this is the kind now sold in this market as "Mexican," we cannot ascertain, but one thing is certain, it is a drug at \$30 or even \$25 a ton.

The "Bird Island" variety, which has been known but a year or two, has been represented as even more valuable than the Peruvian. The last statement of this character was given by *The Washington Union* of the 10th inst., which gives as its authority the new Agricultural Report of the Patent Office. It says: "From careful analysis it has been ascertained that this substance is by far the richest source of phosphoric acid for the farmer yet discovered, as it contains 84 per cent. of dry superphosphate of lime, or about one-third more than pure ground bones." This does not seem likely to be the case, and *The Union's* statement gives other evidence of probable inaccuracy. Several cargoes of these descriptions have been obtained by American vessels, but where they disposed of it is uncertain. Bird Island is one of the West Indies, some 70 miles from Guadaloupe, in latitude 15° 40' 40" north, and longitude 63° 36' west. It is only a small, barren, rocky island of one mile in length. On August 1, 1854, Commodore De Horsey, of the British navy, visited it, when he "found three vessels, under American colors," then loading; and he states, in his letter to the Admiralty, that the island "has 200,000 tons of guano, but slightly inferior to the Peruvian." If such is the case, it affords a good field for our enterprising importers.

STATE AGRICULTURAL SOCIETIES.

In advocacy of a State agricultural society in South Carolina, A. G. Sumner, esq., thus writes:

South Carolina is not even stationary in her industrial pursuits. She is actually and rapidly retrograding. Her old fields are enlarging, her homesteads are decreasing in numbers, her factories are standing idle, or languishing for want of home patronage; her stock is dwindling into ghostly anatomies of vital semblance, and her sons of energy are seeking the more remunerating, hence more genial, fields of the southwest, upon which industry smiles by the sweat of the face of labor. Nor are we alone losing white population; slave population, the true wealth of the State, will soon become stationary, in point of increase, within her borders, by the colonization and occupation of the rich planting lands of those favored regions. Should this be? Is old South Carolina still to furnish the elements of mind and labor to the fruitful forest lands, in which now the spirit of the wilderness reigns? It is true our soil is poor—poor and unfertile—from that careless system of indifference which caused our people to contemplate its gradual and certain determination, with no foresight for their future—which is our own. That glorious west, with soil as deep as its extent of acres was broad, stretched out, in valley and prairie, many thousand hands, to bid them welcome. Sylvan retreats induced expatriation, and the ties of fatherland, of kindred, and of hallowed association, were cast as sacrifices upon the altar of Mammon. We have had enough of this in our State. We must no longer encourage the departure of the flower of our land; but, by developing a spirit of improvement, and thereby increasing attachment to our homes, make the sons of Carolina proud to linger and to labor upon their native soil. How important in this great work would be the workings of a State Agricultural Society! It would give a successful impulse to this spirit of improvement, and the easy and accessible routes of public travel would impress all persons visiting its annual fairs with the advantages which we enjoy over many sections boasting of richer and more productive soil. As long as our people consider that other sections of the country possess greater natural advantages than they do, they will continue restless and dissatisfied. This feeling of dissatisfaction is incompatible with a spirit of improvement, for men will not bestow time and labor upon the preservation of land which they expect to abandon. Anxiety to move—even if it be, like the terrapin, with all his wealth upon his back—becomes the predominant feeling, and the good work stands still. It should be our province to convince the people of the State that all our lands are valuable and desirable; and if we do this, the work of improvement will then manifest itself. Are not all the lands in middle and upper South Carolina valuable? Compare their enhanced price with former valuation—look at the comforts enjoyed by our citizens, where they have health, pure air, crystal water, and contrast these with the bayou, mosquitoes, cholera and yellow fever, which scourge the southwest. Look, too, at the facility with which the rapidly multiplying lines of railroads here convey the products of the soil to market—and think of some of our old friends out west, who, because their magnificent rivers don't happen "to rise," suffer for the business, and even the common necessaries of living. Are not all these things worthy to be weighed in the balance of life? When life, too, is so short, and its rational pleasures, at best, and under the most favorable circumstances, may be compared to a cup of bitter waters, sweetened with but few indulgencies and little satisfaction. Here, where every man is near to the highways of the world—whereby business or pleasure finds an easy transit to distant points—where honesty is still respected and virtue admired, revered, and cherished—here, say we, is the land in which to build and beautify homes—here to cherish those we love—here to do one's part in the brunt of life's ever active battle—here to lay our bones beside the honored graves of our fathers.

Yes, gentlemen, we believe that the institution you propose will in a great measure controvert the evils and injuries done to the State, from the causes adverted to above; but, to do this successfully, requires great energy, labor and foresight. Our old State Agricultural Society was ridden to death, in connexion with aspirations for office. Poor old horse, and rider too, may you rest in peace. We have no purpose which the resurrection of your almost forgotten existence would serve. It was a gas society, which, like all existences of allotted periods lived its time and was no more.

The objects of a State agricultural society should be of a higher aim than to elevate any one connected with it save in the legitimate pursuit of an industrial calling. To merely benefit the recipients of premiums, is not alone the object for which such rewards are offered. The premium is only the active agent which puts vitality into exertion, and inducing competition, thus elevates the mass of observers to the same perfection in theory and principle, which the successful exhibitor has attained and developed to the satisfaction of the society. Its influence does not stop here; but observers take home the lessons which their eyes have stored up, and conversations and discussions will follow, setting inquiry on foot, and benefitting ultimately scores who never visit such rural jubilees.

Here the best breeds of animals can be inspected, and the proper selections made, without running the risk of a venture which might be unsuited to our climate and modes of feeding. The most valuable and best adapted grain and vegetable products, with the most successful and economical modes of culture, would be before the eye of those who wished improvement in this line. The exhibition of the domestic and manufactured fabrics of the State would give lessons to the different sections, which could not fail in being profitable. The neat handiwork of the fair sex, always gracing such exhibitions, like the light clouds which veil heaven from our gaze, are great exemplars, and the tasty patterns are speedily disseminated into the most remote hamlets and rural homes. The arts in taste, mechanics, and every class of ennobling toil, will bring their useful specimens, and labor-saving implements and machinery will be ready to aid the toiler to enlarge his operations with remunerating influence. Not to such things alone do we look for all the improvement; but a society, properly regulated, soon disseminates a mass of valuable information, which will be reliable text upon which to predicate future action. The genial intercourse between all parts of the State, the instructive interchange of opinions upon all matters of industrial improvement and progress, would alone compensate for the erection of the proposed association, independently of the solid advantages which would accrue to those who went into it, in order to benefit the country, whilst they inform themselves.

The management, details and arrangement of raising the means, proper location, and other incidentals, are important matters to be looked into; but I would extend the limits of this communication too far, were I to give you my particular views upon these things. My whole heart and exertions shall be with you, and I hope to see the true "bone and sinew" of the State in the Capitol, on the second Wednesday of August next. Let the people from every nook and corner send up delegates, and where none are appointed, let public-spirited men "come up on their own hook." Every man counts one in this work, and all will be welcomed in the spirit of brotherhood.

THE DIFFERENT VARIETIES OF COTTON SEED.

There are those who ridicule selling improved seed, but they will plant such if given; others ridicule to be thought of the prudent sort of folk. Every one to his notion. In 1833, or about—for it was in '32 or '33—there were those who ridiculed my trying to get up a better seed; they were only my second neighbors. This class has greatly increased, and even improving men lend themselves to this cant. My improving was only intended for home consumption, and would have so continued, had not an estimable friend, an old schoolmate, insisted, if I desired to benefit planters, that I could do more by selling seed, than any other way. He had tried seed grown here, perhaps two years, being sent to him as an old and cherished friend. Others enquiring, put me in the way of selling seed. Of this it matters not; a planter might as well sell seed of corn, oats, &c., as cotton. It is all sheer ruffle-shirt cant, to ridicule selling anything a man has to spare. To cull seed carefully, cure them properly, attend to correspondence, and all the little perplexities, as well as the loss to be incurred if a full crop is not made, is not very satisfactory to one, unless the almighty dollar has complete possession of him. At least, I am willing to quit the business. Some years ago, I offered a near neighbor, and a dear friend, all my improvement, if he would take the trouble off my hands; and I will do so to any planter who will assure me of his devotedness to this matter. The man who is governed only by cent. per cent., will not do. I plant this year near 200 acres, or perhaps over, of select seed. I

think I make by it; selling seed is too small a business—yet to be called the “celebrated cotton man of Edwards, Mississippi,” is enough to induce any one to persevere.

All this by the way. Ridicule may turn some men from principle; it only has the effect on myself to let the writers and speakers see, though not felt, it is not because of want of perspicuity.

We will plant as nearly an entire crop as we have good seed, with the “Cluster” cotton seed; this is the original name, but known now by as many names as there are persons who desire to make money by selling seed. We will plant “Silk,” (called “McBride” by some,) “100 Seed,” “Sugar-Loaf,” “Dean,” and small parcels of others. The “Cluster,” or “Banana,” has been much improved. The best now on sale is “Boyd’s Prolific.” From this I have culled very carefully for three years, I think, and by way of keeping solely for home use, I call them “Home-seed.” Many who have seen this selection, deem it better than the original accidental variety, for I learn from Mr. Boyd that it was an accidental stalk. “Silk” is perhaps better for all descriptions of land; many of my friends prefer it to “Banana,” objecting to the latter on poor and on rich fresh land; on the first, the forms dry up; on the latter breaks down—this latter can be remedied by topping, say one to two feet off. “Sugar-Loaf” is best upon new ground, rich sweet gum land. I have made over 41,000 pounds the first year land was cleared, from 24 acres of land. “100 Seed” still retains its position on rich fresh land.

Of the “Jethro,” several have enquired of me if I knew it. I reply: In the winter of ‘46-’7, Col. H. W. Vich sent me eight small parcels of cotton in the seed, and asked my examination and experiment. They were endorsed thus: “100 Seed,” “Lintonia,” “Diamond,” “Original Stock,” “Seed taken at random from a pile,” “Belle Creole,” “Not a distinct variety, but inclining to Silk,” “8 Locks of the small Diamond,” very valuable, “Sub Ingrid.” These were planted 23d April, 1847, hoed and picked by myself, no one permitted to touch, except ploughing. From the 7th variety, “Inclining to Silk,” I selected what I deemed best in the lot. I sent a few seed to J. H. Hammond, ex-governor of South Carolina, and J. V. Jones, of Georgia. The latter brought it into notice, and I named it, in compliment to him, “Jethro.”

The history is comprised in a line. Colonel Vich sent me a few seed, not a half pint; I planted and worked the crop. J. V. Jones made it tell. To the latter is due the credit, and so let it rest.

The Dean cotton was sent me about five years ago. I think, as “Santa Maria,” by a warm and devoted friend to agricultural improvement, C. B. Stuart, of Texas, from who I have received many kind, similar favors. The production was so meagre, that I discontinued the culture. After it had attracted attention, by 15 and 16 cent price, he again sent me some, and Milton Cabeen, a personal acquaintance and friend, procured me a few seed from Mr. Dean himself. The yield is not one half of my “Banana,” but the staple is excellent. Having been so unfortunate as to make all my crop ordinary to low middling, and getting some 7 to 8 cents, I concluded to make a better article, and now plant all my Dean seed. Silk and Banana yield about the same pure gin stand—say 31 per cent.—ginning out 500 to 1,000 pounds. These yield more lint than any other variety I have tried.

One word as to selecting seed. A contributor of yours from Texas is very correct as to the plan to be followed in making the best seed. It is what all planters should do who desire to promote our cause. There is something else needed, and more than one in a hundred possess. Not alone the desire and care, but discrimination, judgment. We can tell that one article is not good, productive, &c., but to select the best is difficult. Frankly do I confess to the want of that faculty, and have therefore preferred to rely upon the selection of others and to labor to keep up that quality. It is sometimes good economy to buy a pair of pigs, even at \$50, than to spend time and means to bring up to same perfection. This no one can deny. Why not the same of cotton, corn, oats, &c. It is the duty of every planter to strive to add to the knowledge and resources of our cause. We may fail, but the reward is sure—honest intention. Yours, &c.

M. W. PHILLIPS.

EDWARDS, MISSISSIPPI, April 10, 1855.

EFFECTS OF EMANCIPATION.

EFFECTS OF EMANCIPATION—EXAMPLES OF HAYTI, JAMAICA, ETC.

Why is it that our abolitionists and would-be-thought philanthropists of the north are apparently so ignorant of the practical effects of emancipation, and the misery that has resulted therefrom by unwise legislation and blind fanaticism?

Why do they not, instead of standing afar off from these "benighted people," advocating chimerical dogmas, go among them, and by teaching prepare them to occupy a more exalted position, if they are really capable of so doing, as they would have us believe? Is there not field enough for them in Liberia, in Jamaica, and the Danish islands, instead of creating discord at home; and, above all, in Hayti, once the "Queen of the Antilles," and now a mass of corruption, abounding in all that is revolting to civilized and refined minds, both morally and intellectually?

This island has, since the revolt of the blacks in 1792, been steadily retrograding, with the exception of during Boyer's administration, and even then it made no advancement, no progress. There is not a parallel case in the annals of history where the people starting, as the blacks did in Hayti, by conquering a country the richest and most productive in the world of its size, that has sunk in so short a time into absolute poverty.

In 1789 there were, according to reliable statistics, exported 141,000,000 pounds of sugar, and the export of coffee was 76,835,219 pounds; of cotton, 7,004,274 pounds; of indigo 758,628 pounds; and the abundance of luxuries produced enabled the inhabitants to live in a style unequalled elsewhere, even in the tropics.

Before I speak of the present condition of the island, let me repeat an anecdote in illustration, related to me while there not long since by an old resident, an American by birth, who has lived long enough among them to become impoverished like the rest.

He was formerly a merchant, having frequently as many as a dozen vessels in port to his own consignment. Some twenty years since, at a dinner party given by him, on the anniversary of our independence, to the American merchants and shipmasters in port, he spoke of the changes that had already taken place, and among other things, remarked that he expected to see the day when, instead of sweetening their coffee with the sugar produced on the island, as they were then doing, it would be done with sugar imported from the United States. The remark was received with loud acclamations as a good joke, for my friend had the reputation in those days of being somewhat of a humorist. Let us see how his words have been verified.

At this moment there is not one pound of sugar exported from the island, and all that is used is imported from the United States. Some friends of mine have made the attempt to make sugar in a small way within a few years past, but for want of labor were obliged to abandon the project with loss. There is not raised at the very most, as I have been credibly informed by those employed in the custom-houses, more than 40,000,000 pounds of coffee, and the amount decreases yearly. With the exception of Gonaives, there is not a pound of cotton produced, and only a very limited quantity there, barely sufficient for consumption; and instead of exporting, as formerly, indigo, they import all they use from the United States. The people this moment exist (not live) under the most tyrannical and corrupt government known among so-called civilized nations.

I speak from a knowledge of facts, having resided formerly some time in the island, and some of the many circumstances that came to my knowledge then I shall hereafter speak of.

I am, as I ever have been, opposed to slavery in the abstract, and believe it not only a moral wrong, but a greater misfortune to the master than the slave; but I am opposed to the still greater wrong, both moral and social, that must inevitably arise from immediate emancipation. How has it resulted in the English colonies? Was the mere nominal sum paid to the master for his slaves by the English government all that was required, all that was due to him? Was the liberty given to his slave all that he had a right to ask? I think not; for it seems almost a dream when one compares the beautiful estates that formerly adorned those islands to the few and miserably cultivated ones that are now in existence. The negro was formerly as happy and contented as nature designed he should be

with all of his physical wants supplied, supported and protected by a master, upon whom the laws imposed an obligation to protect and support him in return for his labor, and indulged and encouraged in his innocent and holyday amusements. He became intoxicated at finding himself free, and, under no obligations to himself and master, soon lost all desire of self-cultivation, if he ever had any, or to cultivate the soil; and he has year by year degenerated, until now he is lower in the scale of humanity than those of his own people who roam the deserts of Africa; for they "know not what they do," whereas the negro of Jamaica has systematically learned vice and become too ready a pupil, and is now unfitted for any position above the lowest sensualist, and is even looked upon with contempt, to my personal knowledge and observation, by the degenerate natives of Hayti.

NORTHERNER.

AGRICULTURAL DIVISION OF THE PATENT OFFICE.

Olive cuttings for the South.—A considerable quantity of choice olive cuttings have been lately distributed in the southern States bordering on the Atlantic and the Gulf of Mexico. They were selected some months ago by the agent of the office in France from the best and most hardy varieties cultivated in that country. Of the olive it has been said with much justice, "*Olea prima omnium arborum est*;" and, when we consider its usefulness, productiveness, and importance, a little enthusiasm is not altogether misplaced. It had already been introduced into Florida, California, and the Carolinas. Into Florida it was introduced by a colony of Greeks and Minorcans, brought over by Dr. Turnbull, an Englishman, in 1769. Into California the Jesuits transplanted it from their own country about one hundred and fifty years ago; and it was about the year 1755 that Mr. Henry Laurens introduced into Charleston, from remote parts of the globe, a great variety of useful and ornamental productions, among which were olives, capers, limes, ginger, Guinea grass, the African strawberry, (which bore fruit nine months in the year,) red raspberry, and blue grapes; also, directly from the south of France, apples, pears, plums of choice varieties, and the white Chaselas grape, the latter of which bore abundantly. The fruit of the olive tree was prepared and pickled, equal to those imported. In 1785 a society was incorporated in South Carolina for the promotion of agriculture. The object was to institute a farm for agricultural experiments, to import and distribute foreign productions suitable to the climate of Charleston, and to direct the attention of agriculturists of the State to economical objects, as well as to reward those persons who should improve the art of husbandry. Among other objects of interest, the society imported and distributed some cuttings of vines and olives. The latter answered well, but the climate near Charleston proved too moist for the grapes. Attempts have been made to propagate the olive from seeds in various parts of the south, but hitherto with little success. This may be attributed to a tendency in the olive to sport into inferior varieties when so planted; but there is every reason to hope that the new importations of cuttings of approved kinds will increase the production in many parts of the south.

[Congress, in the year 1817, granted four townships of land, in the present State of Alabama, on a long credit, to a company of French emigrants, for the purpose and on the condition of their introducing and cultivating the olive and the grape; but we believe the enterprise never was prosecuted to any considerable extent, and it finally fell through, and the lands reverted to the government.]

THE WEATHER AND THE GRAIN CROPS.

The doubts, such as they have been, of a good harvest, are rapidly disappearing all over the country, while the hopes which the most sanguine have indulged gain daily stronger confirmation. As we conceive that no subject is, or ought to be, at this moment of equal importance with the prospect of the crops, we collate from various sources the following information; most of it, as will be seen, of an exceedingly encouraging nature.

The harvest is pretty well over in most of the southern States, and has commenced in the middle and western. A letter from Nashville, Tennessee, says:

The wheat is all harvested, and the yield is beyond precedent. It is double per acre to any former year, and has been saved in good order. A traveller through Georgia, says: I never saw crops look better. Large corn fields are waving breast high. The fine seasons of rain will make great crops. Farmers near Paducah, on the Ohio river, were busy in the wheat fields June 20. From South Carolina, North Carolina, Kentucky, and Mississippi, the intelligence is that the grain crop is encouraging, and the yield large. The quantity of land this year planted in corn is very considerable. In the up-country wheat is very superior. Oats, too, will make a very fair crop. In Virginia, the Farmville Journal says most of the farmers have begun cutting their wheat. Though somewhat injured by the chinch bug, it promises a much better yield than was at one time expected. The Charlottesville Jefferson also says that the farmers near there are very busy reaping grain, and it thinks that the yield will be greater than for many years previous. Harvest commenced on the Eastern Shore of Maryland this week. A correspondent of the St. Louis Republican, under date of the 13th inst., writing from Cairo, says that in the extreme southern counties of Illinois the wheat harvest is nearly closed, and the yield per acre is said to be equal to that of the best previous year, while the number of acres raised nearly double that of any former season. Such we are informed is also the case in Indiana, while in Ohio, Missouri, and other States west, every intelligence is gratifying beyond precedent.

THE CORK TREE.

About a hogshead of acorns of the cork oak was ordered from the south of Europe for distribution in the middle and southern States for experiment or to test their adaptation to soil and climate. Much is anticipated from their successful introduction. Should a portion of the present distribution by any untoward circumstances fail to answer expectation, care will be taken by the office to obtain another supply for those who feel an interest in growing this useful tree. It will be a subject of national importance if the introduction proves successful. Plantations should be established on every favorable locality, so that in due time the increasing wants of the country may be fully met by the home supply. The tree grows rapidly and attains a height of upwards of thirty feet. Indeed, even in England, there are various specimens over fifty feet high, with a diameter of more than three feet. Cork trees are much esteemed in southern Europe, and land planted with them is considered the most profitable of all that is unirrigated. They seem in general to prefer those localities where gneiss, sandstone, schistose, and calcareous rocks abound. The substance so familiarly known to us as "cork" is the epidermis or outer bark, which sometimes attains a thickness of two or three inches. This is rarely taken off until the tree has arrived at an age of fifteen or twenty years. This operation, which is carried on every six, seven, eight, or nine years, according to circumstances, is generally completed in the months of May and June, while the sap is still active in the tree. Although easy to accomplish, some care is required to avoid injuring the real bark, the "liber," which lies under the cork. A circular incision is usually made around the foot of the tree and another near the branches. Longitudinal cuts are then made; and, finally, by using the handle of a hatchet as a wedge, the cork is detached from the under bark. The larger branches are treated in a similar manner.

SOUTHERN FLOUR.

A Liverpool paper by the last steamer has the following notice, which will be interesting to our readers:

BREADSTUFFS FROM THE UNITED STATES.—The reports of the growing crops of breadstuffs in America are now favorable, and if the weather should be auspicious for the in-gathering, the quantity will exceed an average, as a greater breadth of land than usual has been sown. We are glad to find that Charleston, (S. C.) is likely to be able to export flour, (which is very unusual,) for we have seen a very beautiful sample, branded Williams, Bronson and Company, which

will be sure to command a liberal price, as it possesses great strength and is finely dressed.

This flour, we learn on inquiry, was from Tennessee. We are also informed that samples of flour from the mills of Knoxville have been received in this market equal in every respect to the best from any other quarter. Choice Georgia brands have gained an established reputation.

The great difficulty with southern flour has been in the imperfect milling and putting up. Remove this, and it will speedily take its place at the head of the market, both at home and abroad.

The flour of warm climates is stronger than that of the colder. It has more nutriment, and suffers less from transportation. The flour of the Richmond mills was especially favored in California. It was the only kind that could be depended on to bear the passage round Cape Horn without souring.

Tennessee, Northern Georgia, and the Western Carolinas, thus promise to become one of the chief granaries of the world; and of a large part of this vast region Charleston is the natural market. It depends upon our merchants whether the advantages of their position shall be made tributary to the prosperity of the city.

HORSES AND MULES FOR THE SOUTH.

The neglect of grain crops by the cotton planters of the south has been often and justly animadverted upon. The maxim "produce, if possible, all of your home supplies at home"—cannot be too often or too deeply impressed upon the agricultural community of the Mississippi valley south.

But there is one corollary from this maxim, which so far, we believe, has been but little agitated or discussed. With every natural facility for growing fine horses and mules, all the cotton States (excepting a small portion of Tennessee) are tributary to Kentucky and the western States for their supplies of those useful and indispensable auxiliaries of man, whether engaged in agriculture or commerce.

There is no reason why Tennessee, Arkansas, Mississippi, Alabama, Georgia, and Texas, should not raise all of their own horses and mules. There is no earthly reason why these States should not also raise all their own corn, hogs, cows, &c. There is, likewise, no earthly reason why these States should not pay particular attention to the improvement of the breeds of all the different kinds of stock.

It is sometimes said that the south is not a good grazing country, and, therefore, not suitable for growing fine stock. A moment's consideration will show that this is the purest "fudge." The lowlands bordering upon every perennial stream in the south—from the lordly Tennessee to the smallest brook "singing its quiet tune," are capable of being made, at a little expense, the finest pastures in the world.

Look at the Tennessee river bottom; how many millions of acres are there, yet awaiting the occupancy of the grazier, to whose purpose they are better suited than to those of any other class of agriculturists? So of Obion, Forked Deer, Hatchie, Wolf, Tallahatchie, the upper Tombigbee, and all the streams, large and small, of the south, including the mighty Mississippi, large portions of whose immense bottom are admirably adapted to all the requirements of the stock grower.

When will the south be true to herself? When will southern men learn their true policy? When will they learn that everything produced at home, corn and horses, peas and cows, potatoes and mules, shucks and sheep, brogans and beef, is a saving of always double, and often quadruple, of what the same article would cost, if they have it to buy?

COMPETITION OF INDIA IN COTTON.

Dr. Royle, of England, concludes his great work on the commerce and culture of cotton in India with the following remarks, which will be read with interest through our planting States:

Having carefully considered every point which seemed to be connected with the culture and commerce of cotton in India, and with an attention to details, which to many may appear unnecessary; we may briefly refer to a few of the conclusions at which we have arrived, in order to see what are the prospects of the cotton trade of India being placed on a more extended and yet comparatively secure basis.

First the American and Indian cottons have been shown to belong to distinct species of plants; and that the staple of the former seems to be naturally longer and stronger than that of the latter, at least in the situations where, and modes in which they are at present respectively grown.

One of the American species, that yielding the New Orleans cotton, now yields the great mass of the cotton of commerce, and the deficiency or excess in its crops controls the prices of all other cottons and the demand in a great measure for Indian cotton in its present condition. This, we have seen, is imported in considerable quantities when American cotton is dear, and in greatly diminished ones when the latter is abundant and cheap.

In a former part of this work (p. 64,) which was finished at the beginning of the year 1850, it was stated, that "we have no doubt that, in the present year, they (that is, the imports of Indian cotton,) will be as high as they have ever been;" and, at p. 83, that the importations "will be to a greater extent, as the unfavorable prospects of the American crop were early known to some, and orders sent to India for cotton." That these anticipations have been fully confirmed, we may see by comparing the imports of the year 1850, with those of the year 1849, as given in the circular of Messrs. Tetley, dated London, 31st December, 1850, where the former not only exceed the latter to the extent of 127,059 bales, but are higher than they have ever been:

	1849.	1850.
Import of America.....	1,477,512	1,182,970
Import of Brazil.....	163,445	171,359
Import of Egyptian.....	72,727	79,376
Import of West Indies, &c.....	9,485	5,264
Import of East India.....	182,079	309,168
Total.....	1,905,248	1,748,137
Exported.....	256,300	272,400
Home consumption.....	1,586,608	1,513,007
Average per week.....	30,512	29,096
Stock 31st December.....	558,390	521,120
Prices of Upland, 31st December.....	5½d. a 6¾d.	7d. a 8½d.

Indian cotton is, no doubt, possessed of sufficient good qualities to be used for the manufacture of calicoes, which wear better than those of English manufacture, as well as of muslins, which have been admired in all ages, and almost justify the poetical expression of "webs of woven air," "dew of night," "running water," and similar expressions applied to them by the natives of the East, and which an English manufacturer complimented, when he wished to disparage, by calling them the "shadow of a commodity."

Indian cotton is, however, from the shortness of staple, not well suited for all the purposes of the English manufacturer; but it is much more depreciated than it need be, from the dirty and adulterated state in which it is sent to market. When these defects are avoided, it sells in the English market at fair prices, and if continued to be so sent, would be used in greatly increased quantities. It has been shown that it can be laid down in Liverpool with some profit at 3½d. a pound, from Bundelcund, Broach, Candeish, Dharwar, Coimbatore, and Tinnivelly; districts which are within the company's territories, and most of them near the sea

or river. It may even be imported at nearly the same price from the far distant territories of Hyderabad and Nagpore. But it is essential that the cotton should be sent in a clean state. If this is not done the expenses will have to be paid on dirt as well as on cotton, while a lower price will be realized in the market.

American cotton is, however, that which is most valued by the manufacturers of this country, and is also the kind which is most profitable to the cultivator in districts where the climate is suitable. Repeated experiments having been made by the East India Company during a series of years to introduce the culture of American cotton into India, and without any permanent effects being produced, it has been inferred that failures will follow the present or any future attempts. But in former experiments good cotton was produced, and there is no reason to believe at a greater comparative cost than in the present experiments, while in some districts the American plants then introduced have become so naturalized as to be taken for indigenous kinds, and the staple, after so many years of acclimation, has been considered nearly equal to that of New Orleans cotton. The present experiments might have resulted in failure, if it had not been for the determined perseverance with which they have been carried on in districts where there appeared no sufficient physical obstacles to success, as in Dharwar, Belgaum, Candeish, Coimbatore, and Tinnivelly. In these districts cotton has been grown from American seed, which has been highly valued by manufacturers as well fitted for their purposes, and has been bought by them at prices which have been amply remunerative, both to cultivators and to importers. The cost, as shown in the details given under the heads of Dharwar and Coimbatore, was not more than for native cotton, that is, about 3½d. a pound, laid down in Liverpool. The price realized has never been less than this sum, even before the cotton had attracted attention; since then it has frequently sold for 6d. and 6½d., and of late for 7d. and 7½d. The profits realized by government, even upon the comparatively small quantities, have in the Dharwar district nearly balanced the cost of the experiments. Merchants could no doubt have realized larger profits; but in future the cultivators will expect to share more largely in the better prices arising from the increased value of this cotton in the English market. The extent to which the cultivation has been carried, in consequence of the encouragement held out, first by government, and lately by the agents and orders of merchants, is so considerable, that it is expected that not less than 9,000 bales of American cotton will be sent through Dharwar to this country in the present year. In Belgaum and Candeish the culture is also extending. In the Madras presidency, however, the natives have taken but slowly to the culture of American cotton. But the presence of European agents would remove their prejudices, and as the cotton is better, and the expenses not greater than in Dharwar, there is sufficient encouragement both for cultivators and for merchants.

In discussing the questions relating to the causes which interfere with the extended culture and commerce of cotton in India, we showed that the cultivator had little encouragement to grow that which was in such irregular demand for the English market, and that the manufacturer here was little inclined to use a cotton which, besides being shorter in staple, was sent to him in a dirty and adulterated state. He, therefore, abstains from using it, unless when compelled by the high price of American cotton. We have also shown that there was little chance for the natives themselves doing much in picking their cotton carefully, or in keeping it clean, and that, therefore, the presence of European agents among them was essential to encourage the ryots to do even that which is so much for their own advantage. Such agents would, moreover, be able to counteract the influence of the local dealers and money lenders, and the opposition of the Brahminical caste to all kinds of innovation and improvement.

The settlement of Europeans or their agents in the cotton districts, with the express purpose of encouraging the natives to improve the cultivation of their own or to grow the American cotton, is the measure which has been recommended as the one thing essential for the extension and improvement of this great staple. As the trade has been described to be profitable, it appears remarkable that no planters should have established themselves for an object which is considered of such importance by the manufacturers of Lancashire. Within the limits of the Bengal presidency there are numbers of Europeans settled in various parts, many of whom have made experiments in cotton culture, as recorded in the "*Transactions of the Agricultural Society of India.*" In North West India we

have seen Mr. Hamilton Bell undertaking the culture, on an extensive scale, of what he conceived to be the best kind of indigenous cotton, in a situation where American cotton would not succeed without the aid of irrigation. But the Agra-grown cotton was not approved of at Manchester. Mr. Bruce, again, long resident in the Doab and Bundelcund, and accustomed to the culture and commerce of cotton, has offered to supply (p. 307) manufacturers here with American cotton at 4*d.* or 4½*d.*, and native at 3*d.* or 3½*d.* a pound.

On the Bombay side of India the American planters employed by government in the Dharwar district long complained that their efforts were not seconded by the merchants of that presidency sending agents or orders into the districts, which would encourage the ryots to grow American cotton in preference to their own. The sales of the American cotton, both in Bombay and this country, raised its price by degrees in the district; but still it was chiefly bought by government agents. Mr. Turner, the president of the Commercial Association of Manchester, took great pains (*v. Summary*) to instruct his agents in Bombay of the great value of the American cotton grown in Dharwar, and gave orders for its purchase. But to be effectual these orders required to be executed in the district itself. This also Mr. Turner arranged to have done; but his orders, and those of his friends, could not be executed, because the native dealers had at last become fully aware of the value of American cotton. Some of them, stimulated, no doubt, by the orders of their employers in Bombay, were purchasing it at a high price, 100 rupees a candy, where a few years since they would not give half that sum for that quantity. One of the Bombay houses is mentioned, in a private letter, as having sent an agent into the district. A few months since a gentleman called upon the author, previous to departing for India in order to join one of these houses, and who stated that he was to be stationed in the interior, either in Dharwar or in Candeish, for the express purpose of carrying on the cotton trade in direct communication with the cultivators. In the Broach district, though the American cotton does not succeed there, Mr. Landon has established himself as a purchaser of native cotton, which, by attention to careful picking and cleaning, he conceives may be sent to market in a state to compete with the uplands variety of American cotton. While in the government service he greatly improved the working and economy of the saw-gin. Since then, it is understood, he has introduced steam power for the propulsion of his machinery, as, indeed, it was always his intention to do. Into the district of Candeish Messrs. Stewart, Ritchie & Co., of Bombay, have sent an agent and have agreed to purchase as many saw-gins as can be supplied by the government factory at Dhurrumgaum. Such an agent, besides purchasing native cotton, will be able to encourage the growth of American cotton, for which, as we have seen, parts of the district are well suited. It is to be hoped that the planters now sent into Sattara, Surat, and Ahmedabad, will be sufficiently successful to induce some Europeans to establish themselves as cotton planters on their own account. It is also to be hoped that means may be adopted for picking and cleaning the good cotton of the far distant provinces of the Nizam territories, and also for introducing the American cotton into the Berar Valley, as Captain M. Taylor is so successfully doing in the principality of Shorapore.

In the Madras Presidency, Mr. Hughes long since established the culture of Bourbon cotton, and his successors have carried it on, though it is not now sent of such good quality as formerly. Mr. Fischer has for many years been established in the district of Salem, as an agent for the purchase of cotton for the European market; but the natives have not been induced to take up the culture of American cotton. Mr. D. Lees has, however, shown that New Orleans cotton may be successfully cultivated in the most barren parts of the Tinnivelly district, and has sent for his nephew to go on with the culture, as we learn from the "Manchester Guardian." His success and his statements have encouraged another Manchester man to determine upon proceeding to India to commence the culture of American cotton in the same district, as he intimated only a few days since at the India House. Besides this, offers have been made in India for the purchase of the machinery for cleaning cotton, which has been set up by the Indian government at Coimbatore, and this offer, the author has learnt, originates in Manchester, as the proposer has lately stated to the home authorities. The establishment of a few energetic Europeans in different districts, interested in the improvement of the cotton of India, the author feels satisfied, is all that is

required greatly to extend and improve the culture and commerce of cotton of all kinds in India.

The author begs to conclude the subject by quoting some of his observations on the same subject, published in the year 1834, which will show that he has always relied on the principles advocated here.

“I have no doubt that by the importation of foreign and the selection of native seed, attention to the peculiarities, not only of soil, but also of climate, as regards the course of the seasons, and the temperature, dryness, and moisture, of the atmosphere, as well as attention to the mode of cultivation, such as preparing the soil, sowing in lines, so as to facilitate the circulation of air, weeding, ascertaining whether the mixture of other crops with the cotton be injurious or otherwise, pruning, picking the cotton as it ripens, and keeping it clean; great improvement must take place in the quality of the cotton. Experiments may at first be more expensive than the ordinary culture; the natives of India, when taught by example, would adopt the improved processes as regularly and as easily as the other; and as labor is nowhere cheaper, any extra outlay would be repaid fully as profitably as in countries where the best cottons are at present produced.”—(*Illustrations of Himalayan Botany*, p. 97.)

CONSUMPTION OF ANIMAL FOOD IN THE UNITED STATES.

Heretofore we have known very nearly the number of animals raised in the United States, but we have not known the number and weight of animals actually consumed in the country. But this fact is very desirable, and will prove very useful. It is well known that the cattle, as well as the hog trade, furnish a very large portion of the exchanges of the country, and hence the question of how much, where, and when animal food is consumed, has a direct relation to the financial as well as commercial concerns of the country. The progress of statistics, however, gradually furnishes the materials to show this, and all similar problems. The great difficulty is to find a unit of measurement for the consumption of cattle and hogs. In the cattle trade, we know that the great cities of the country are the main purchasers of cattle, inasmuch that what enters into general commerce is a very small amount of what is consumed in the large towns. With hogs it is something different, for an immense amount of pork and lard enter into general commerce for exportation, especially to southern latitudes, and for the navies and armies of the world.

At present we shall confine ourselves to the supply and consumption of cattle and sheep as food; in other words, beef and mutton. For the consumption of beef, we want a unit. It might have been furnished by the statistics of Smithfield market, London; but we are not aware that they have been kept and recorded. The New York market, however, is a still better test, for the whole of our population are meat eaters. Fortunately, all the cattle, sheep, and calves consumed in New York are sold from some half dozen yards. Fortunately, also, the New York *Tribune* has kept a reporter especially for those yards, and has given us the entire number of cattle, sheep, and calves consumed in 1854 in New York city, including Brooklyn, &c. The aggregate result is as follows:

Cattle consumed.....	154,000
Sheep and lambs.....	470,000

We know very nearly the average weight of these animals, and the population by whom they are consumed. The average weight of the cattle may be taken at 750 pounds, and of the sheep and calves, 80 pounds. The population of New York, Brooklyn, and Williamsburg, in 1854, was about 750,000. Here, then, we have the elements for the solution of the general problem.

Before we go further, let us look at the financial aspects of the question, as between New York and the west, where cattle sold for an average of \$70 each; the sheep and calves at an average of \$5 50 each. We have then this result:

Value of 150,000 cattle.....	\$10,780,000
Value of 470,000 sheep and lambs.....	2,585,000

Aggregate value of beef and mutton in New York..... 13,365,000

Now, full three-fourths of this entire amount came from the west, beginning with the valley of the Alleghany, in New York and Pennsylvania. New York, then, has to pay *ten millions of dollars* to the west for cattle and sheep, (independent of wool,) and the west is thus furnished with ten millions in exchange for the payment of its dry goods. This financial operation is one of great importance, and makes no small part of the business of the banks in the interior of Ohio and Kentucky. It is a safe and profitable business; and in regard to their own operations, no banks are safer than those based on the cattle trade.

But let us look at the general consumption of cattle in this country. The above facts show that each 1,000 persons in civic population consume 205 cattle and 533 sheep per annum. What does this give us for the whole town population of the United States? The following table will exhibit the account:

Names of towns.	Population.	Cattle.	Sheep and lambs.
New York.....	750,000	154,000	470,000
Philadelphia.....	500,000	101,000	313,500
Boston, including Roxbury and Charlestown.	180,000	36,900	109,990
Baltimore.....	210,646	43,050	125,980
New Orleans.....	150,000	30,800	94,000
Cincinnati.....	160,000	32,850	99,330
St. Louis.....	90,000	18,460	47,997
Charleston.....	50,000	10,276	31,333
Buffalo.....	50,000	10,276	31,333
Cleveland.....	30,000	6,150	19,080
Chicago.....	50,000	10,276	31,333
Detroit.....	25,000	5,133	15,666
Albany.....	60,000	12,000	38,160
Troy.....	30,000	6,150	19,080
Rochester.....	40,000	8,200	25,440
Portland.....	25,000	5,133	15,666
Lowell.....	35,000	7,175	22,260
Salem.....	20,000	4,100	12,720
Manchester.....	15,000	3,078	9,540
New Bedford.....	18,000	3,690	9,599
Pittsburg, including Alleghany.....	100,000	20,500	63,600
Wheeling.....	20,000	4,100	12,720
Richmond.....	30,000	6,150	19,080
Norfolk.....	25,000	5,133	15,666
Louisville.....	60,000	12,300	38,160
Memphis.....	15,000	3,078	9,540
Other towns over 5,000.....	200,000	246,000	763,200
Aggregate.....	3,938,646	806,232	2,453,483

The towns over 5,000 inhabitants each in the United States contain at present four million of inhabitants, or about one-fourth the population of the country. The large towns consume eight hundred thousand beeves and two and a half million of sheep and lambs. At an average of \$50 each for the beeves, and \$3 each for the sheep, which is not too much, we have the following result:

Value of 800,000 beeves..... \$40,000,000
 Value of 2,500,000 sheep and lambs..... 7,500,000

Let us now add to this the hogs of commerce:

3,000,000 at \$8..... 24,000,000

Total..... \$71,500,000

If, now, we add to this aggregate the pickled beef, the salt barrels, and labor used in packing pork, and finally the value of wool sold from sheep, we find the

commerce in animals amounting in value to full one hundred millions of dollars; an amount greater than the entire cotton crop. Two-thirds of this entire product comes from the States in the valley of the Ohio; and we shall not be beyond the mark in saying, that the States of Ohio and Kentucky create an exchange on the Atlantic States equal to twenty millions of dollars per annum, derived from the commerce in animals.

In reference to the average weight consumed, if the above number of beeves, sheep, and hogs, be reduced to their aggregate weight, and then divided by four millions, (the aggregate of town or city population,) the result will be about 15 ounces to each individual per diem. Now, the daily ration of solid meat allowed in the British navy is 12 ounces, which may be taken as the average for adults. The excess of quantity found in the above calculation will be fully accounted for by exportation to other countries, and by the consumption of towns of less than 5,000 inhabitants. The general accuracy of the above calculation is, therefore, sufficiently proved, and the magnitude of the result furnishes another illustration of the value of internal commerce.—*Cincinnati Price Current.*

THE SORGHO, A NEW SUGAR PLANT.

The scarcity of corn in France, as we learn from an English cotemporary, has drawn attention to a new plant, recently introduced from China, which promises to supersede, to a certain extent, the use of beet root in the manufacture of sugar and the distillation of alcohol. The agricultural committee of Toulon has recently addressed a report to the minister of war, with respect to the use of the plant in question. It is called the *sorgho*, or *holeus saccharatus*, and was first introduced into France in 1851, by M. de Montigny, the French consul in China, who sent some grains of the seed to the government. Since then the culture of the plant has been commenced with success in Provence, and promises to be of great advantage to Algeria. The *sorgho* has been called the "sugar cane of the north of China," and numerous experiments have recently been tried with a view to ascertaining if it possesses the properties necessary for producing a crystallizable syrup, so as to become a rival to sugar cane and beet root. According to the report of the Toulon Agricultural Association, it would appear to have those properties. The fact has been ascertained by a series of experiments made in the department of the Var. It also appears to be richer in the saccharine principle than any known plant, except the vine. Beet root contains from eight to ten per cent. of sugar; the *sorgho* produces from sixteen to twenty per cent., from which eight or ten per cent. of pure alcohol, fit for all industrial and domestic purposes, can be produced. The refuse is excellent food for cattle, who are very fond of it. The plant grows with great rapidity, and does not require irrigation. The *sorgho* is not a new discovery, as it has been used from time immemorial by the inhabitants of the north of China, by whom large quantities of sugar are extracted from it. But this is the first time it has been produced on anything like an extensive scale in Europe.

HOME-MADE GUANO.

S. B. Halliday, of Providence, R. I., has a process by which he can convert the fish which swarm our coast every season into an article like guano, at less than half the cost of the Peruvian article, and Professor Hare, of Philadelphia, thinks equally valuable. Mr. Halliday says:

"I am able to say very confidently that this product can be afforded at \$25 per ton, and pay the manufacturers more than fifty per cent. The oil (according to Drs. Jackson and Hale) being almost valueless for fertilizing purposes, it is first taken from the fish, and they are then converted into guano. The cost of the fish is about \$2 per ton, and containing nearly 3 per cent. of oil, and the oil will pay for the fish, and nearly for the labor in manufacturing. By my own experiment, I thoroughly demonstrated the rendering of fish into guano. I then consulted Dr. Hare, of Philadelphia, who, I ascertained, had experimented extensively and successfully. I obtained from him his process, and have received considerable instructions from him on the subject. I have also consulted Dr. Jackson more recently. These gentlemen, and all with whom I have consulted, agree as to the great value of this fertilizer."

SUGAR—ITS CULTURE AND CONSUMPTION IN THE WORLD.*

No. 1.—SUGAR.†

Sugar is obtained from many grasses, and, indeed, is common in a large number of plants. It is procured in Italy from *Sorghum saccharatum*; in China, from *Saccharum sinense*; in Brazil, from *Gynerium saccharoides*; in the West Indies, from *saccharum violaceum*; and in many other parts of the world from *S. officinarum*. The last two are commonly known as sugar canes, and they are generally considered as varieties of a single species, *S. officinarum*, which is now widely spread over different parts of the world.

Some curious specimens of palm sugars were exhibited at the Great Exhibition of 1851—among others, gomuti palm sugar (*Arenga saccharifera*) from Java; date palm sugar, from the Deccan; nipa sugar, from the stems of *Nipa fruticans*; and sugar from the fleshy flowers of *Bassia latifolia*, an East Indian tree.

Among the other sugars shown were beet-root sugar, maple sugar, date sugar, from Dacca, sugar from the butter tree, (*Bassia butyracea*), produced in the division of Rohékkund, in India; and sugar candy, crystalized by the natives of Calcutta, and other parts of India.

Sugar and molasses from the grape were also shown, from Spain, Tunis, and the Zollverein.

Sugar, or sugar candy, has been made in China from very remote antiquity, and large quantities have been exported from India, in all ages, whence it is most probable that it found its way to Rome.

The principal impurities to be sought for in cane sugar are inorganic matter, water, molasses, farina, and grape, or starch sugar. The latter substance is occasionally, for adulterating purposes, added in Europe to cane sugar; it may be detected by the action of concentrated sulphuric acid and of a solution of caustic

* By P. L. Simmonds, of London.

† Sugar seems to have become a regular article of importation into Great Britain from the United States. The consumption of imported sugar in 1854, according to Parliamentary returns, was as follows:

Imported sugar consumed in Great Britain.

	Cwt.
1831.....	81
1840.....old duties..	2,305
1844.....	92
1845.....reduction..	76,994
1846.....	584,366
1848.....	1,216,912
1854.....	2,439,291

Of the quantities consumed in 1854, the origin was as follows:

	Cwt.
Cuba.....	1,340,320
Porto Rico.....	303,429
United States.....	61,606
Brazil.....	404,415
Java.....	110,068
Philippine Isles.....	120,975
	2,340,813

Such has been the vast increase in the consumption of slave-grown sugar by England since she emancipated her own sugar-growing slaves. According to England's demand for sugar has the value of slaves in the Spanish islands risen and fallen, and the activity of the slave trade increased or depressed in proportion. Cuba and the United States are now both competitors in the British markets for the sale of sugar. It should be remarked, however, that the English returns do not distinguish between the country of growth and of export. It is therefore possible that a proportion of that derived from the United States may be Cuba sugar. The great diminution which this year takes place in the production of beet-root sugar in Europe must have a great influence upon the cane article for the coming year.—*United States Economist*.

potassa; the former blackens cane sugar, but does not affect the starch sugar^e while potassa darkens the color of starch sugar, but does not alter that of can sugar. But the copper test is far more delicate. Add to the solution to be tested a few drops of blue vitriol, and then a quantity of potassa solution, and apply heat; if the cane sugar is pure, the liquor will remain blue, while, if it be adulterated with starch sugar, it will assume a reddish-yellow color.

Inorganic matter is determined by incineration, farina by the iodine test, water by drying at 210 degrees, and molasses by getting rid of it by re-crystallization from alcohol, as also by the color and moisture of the article.

The natural impurities of sugar are gum and tannin; gum is detected by giving a white precipitate with diacetate of lead, and tannin by giving a black coloration or precipitate with persulphate of iron.

An experienced sugar-dealer easily judges of the value of sugar by the taste, smell, specific gravity, moisture, and general appearance.

The value of molasses may be determined by drying at 220 degrees, and by the taste.

The commercial demand for sugar is mainly supplied from the juice of the cane, which contains it in greater quantity and purity than any other plant, and offers the greatest facilities for its extraction.

Although sugar, identical in its character, exists in the maple, the cocoa-nut, maize, the beet-root, and mango, and is economically obtained from these to a considerable extent, yet it is not sufficiently pure to admit of ready separation from the foreign matter combined with it, at least by the simple mechanical means the ordinary producers usually have at command, unless carried on to a large extent, and with suitable machinery and chemical knowledge and appliances.

The different species of commercial sugar usually met with in this country are four, viz: brown, or muscovado sugar, (commonly called moist sugar,) clayed sugar, refined or loaf sugar, and sugar candy; these varieties are altogether dependent on the difference in the methods employed in their manufacture.

The cultivation of the sugar cane and the manufacture of sugar were introduced into Europe from the East, by the Saracens, soon after their conquests, in the ninth century. It is stated by the Venetian historians, that their countrymen imported sugar from Sicily, in the twelfth century, at a cheaper rate than they could obtain it from Egypt, where it was then extensively made. The first plantations in Spain were at Valencia; but they were extended to Granada, Mercia, Portugal, Madeira, and the Canary islands, as early as the beginning of the fifteenth century. From Gomera, one of these islands, the sugar cane was introduced into the West Indies, by Columbus, in his second voyage to America, in 1493. It was cultivated to some extent in St. Domingo in 1506, where it succeeded better than in any of the other islands. In 1518, there were twenty-eight plantations in that colony, established by the Spaniards, where an abundance of sugar was made, which, for a long period, formed the principal part of the European supplies. Barbadoes, the oldest English settlement in the West Indies, began to export sugar in 1646, and as far back as the year 1676 the trade required four hundred vessels, averaging one hundred and fifty tons burden.

The common sugar cane is a perennial plant, very sensitive to cold, and is, therefore, restricted in its cultivation to regions bordering on the tropics, where there is little or no frost. In the eastern hemisphere its production is principally confined to situations favorable to its growth, lying between the fortieth parallel of north latitude and a corresponding degree south. On the Atlantic side of the western continent, it will not thrive beyond the thirty-third degree of north latitude and the thirty-fifth parallel south. On the Pacific side it will perfect its growth some five degrees further north or south. From the flexibility of this plant, it is highly probable that it is gradually becoming more hardy, and will eventually endure an exposure and yield a profitable return much further north, along the borders of the Mississippi and some of its tributaries, than it has hitherto been produced. In most parts of Louisiana the canes yield three crops from one planting. The first season is denominated "plant cane," and each of the subsequent growths, "ratoons." But, sometimes, as on the prairies of Attakapas and Opelousas, and the higher northern range of its cultivation, it requires to be replanted every year. Within the tropics, as in the West Indies and elsewhere, the ratoons frequently continue to yield abundantly for twelve or fifteen years from the same roots.

The cultivation of this plant is principally confined to the West Indies, Venezuela, Brazil, Mauritius, British India, China, Japan, the Sunda, Philippine, and Sandwich Islands, and to the southern districts of the United States. The varieties most cultivated in the latter are the striped blue and yellow ribbon, or Java, the red ribbon, violet, from Java, the Creole, crystalline or Malabar, the Otahaiti, the purple, the yellow, the purple-banded, and the grey canes. The quantity of sugar produced on an acre varies from five hundred to three thousand pounds, averaging, perhaps, from eight hundred to one thousand pounds.

Six to eight pounds of the saccharine juice of the plant, yield one pound of raw sugar; from 16 to 20 cart-loads of canes, ought to make a hoghead of sugar, if thoroughly ripe. The weight necessary to manufacture 10,000 hogheads of sugar, is usually estimated at 250,000 tons, or 25 tons per hoghead, of 15 or 16 cwt.

The quantity of sugar now produced in our colonies is in excess of the demand of the consumers, that is, of their demands cramped as they are by the duties still levied on sugar consumed in Great Britain, imposed for the purpose of revenue; the high duty on all other but indigenous sugar, consumed all over the continent, imposed to promote the manufacture of beet-root sugar, and the legal duty levied on all other than indigenous sugar used in the United States, for the purpose of protecting the sugar production of that country; and so long as that excess exists—until a further reduction of duties shall increase consumption and cause sugar to be used for many purposes which the present high rates prohibit its being applied to—any improvement which may be effected in quality—any increase which may be effected in the quantity of colonial sugar—will only result infinitely more to the benefits of the consumers than the producers. In 1700 the quantity consumed in Great Britain and Ireland was only about 200,000 cwt. In 1852, including molasses, &c., it was not less than 8,000,000 cwt., a forty-fold increase in the century and a half. Taking the whole population last year, it was nearly 28 pounds per head. In 1832 the consumption in Great Britain alone was put down by Mr. McCulloch at 23 pounds; and as my estimate includes Ireland, where the consumption is notoriously small, we may infer that it has increased in Great Britain since 1832 at least 5 pounds per head. As the allowance to servants is from three-quarters of a pound to a pound per week, it may be assumed that 50 pounds a year, at least, is not too much for grown persons. In sugar producing countries the quantity consumed is enormous; the laborers live on it in the manufacturing season; and a Duke of Beaufort, who died about 1720, consumed one pound daily for forty years, and enjoyed excellent health till he was seventy years of age. The consumption of sugar has increased considerably since it has become cheap; and we may expect, therefore, that the consumption will extend more rapidly than ever. The whole quantity consumed in Europe last year, including beet-root sugar, was not less than 16,000,000 cwt. If peace be preserved and prosperity continue, the market for sugar will extend amazingly, and force the cultivation by free men in all tropical countries.

Years.	British plan- tation.	East India & Mauritius.	Total of B. P. E. I., & Mau- ritius.	Consump- tion.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1838-39.....	176,033	54,017	230,050	195,483
39-40.....	141,219	60,358	201,577	191,279
40-41.....	110,739	52,232	162,971	179,741
41-42.....	107,560	97,792	205,352	202,971
42-43.....	123,685	80,429	204,114	199,491
43-44.....	125,178	78,943	204,121	202,259
44-45.....	122,639	81,959	204,598	206,999
45-46.....	142,384	102,690	245,074	244,030
47-48.....	164,646	125,829	290,475	289,537
48-49.....	139,868	107,844	247,712	308,131
49-50.....	142,203	121,850	264,053	296,119
50-51.....	129,471	119,317	248,788	305,616
51-52.....	148,000	110,000	258,000	312,778

The above figures refer to raw sugar only.

At these periods, calculating from 1838-39, the duty on British sugar ranged from 24 shillings down to 10 shillings per cwt., and foreign slave-grown sugar from 63 shillings down to 14 shillings. The greatest impetus was given to foreign sugar when the duties were reduced, in 1846.

The extension of sugar cultivation in various countries where the climate is suitable, has recently attracted considerable attention among planters and merchants. The Australian Society of Sydney offered its Isis gold medal recently to the person who should have planted, before May, 1851, the greatest number of sugar canes in the colony. I have not heard whether any claim was put in for the premium, but I fear that the gold fever has diverted attention from any new agricultural pursuit, and that honorary gold medals are therefore unappreciated. Moreton Bay and the northern parts of the colony of New South Wales, are admirably suited to the growth of all descriptions of tropical products.

The Natal Agricultural Society is also making great exertions to promote sugar culture in that settlement. Mr. E. Morewood, one of the oldest colonists, has about 100 acres under cultivation with the cane, and I have seen some very excellent specimens of the produce, notwithstanding the want of suitable machinery to grind the cane and boil the juice. Many planters from the East Indies and Mauritius are settling there. His Royal Highness Prince Albert awarded, through the Society of Arts, a year or two ago, a gold medal, worth 100 guineas, to Mr. J. A. Leon, for his beautiful work descriptive of new and approved machinery and process employed in the cultivation and preparation of sugar in the British colonies, designed to economise labor and increase the production.

The centrifugal machines, recently brought into use, for separating the molasses from the sugar, more quickly than the old-fashioned method of coolers, have tended to cheapen the production and simplify the processes of sugar making. The planters object, however, to the high prices which they are charged for these machines, so simple in their construction; and that they are not allowed by the patent laws to obtain them in the cheaper markets of France and Belgium.

Great loss has hitherto taken place annually, in the sugar colonies, through the drainage of the molasses, resulting from the imperfect processes in use; but this can now be obviated, by the use of the centrifugal machine. It is a modification of the "hydro-extractor," and is the invention of Mr. Finzel, of Bristol.

The machine being filled with sugar, appropriately placed, is rapidly revolved, and a powerful centrifugal force generated; the moisture is speedily removed to the circumference of the revolving vessel, and passes off through apertures adapted for the purpose.

Various other improvements in the making of sugar have been carried into effect within the last few years by Dr. Scoffern, Messrs. Oxland and M. Melsens, but the description of these would occupy too much of my space, and those who are desirous of growing sugar on an extensive scale, I must refer to Dr. Evans' "Sugar Planter's Manual," Mr. Wray's "Practical Sugar Planter," Agricola's "Letters on Sugar Farming," and other works which treat largely and exclusively of the subject.

An announcement has recently been made, that a Mr. Ramos, of Porto Rico, has discovered some new desiccating agent, to be used in sugar making, which is to cost next to nothing, but improves most materially the quality of the sugar made, and also increases considerably the quantity obtained by the ordinary process.

The average annual quantity of cane sugar produced and sent into the market of the civilized world, at the present time, may be taken at 1,500,000 tons, exclusive of the amount grown and manufactured for local consumption in India, China, Cochin China, and the Malay Archipelago, of which no certain statistics exist, but which has been estimated at about another million tons.

So far back as 1844, the Calcutta "Star," in an article on sugar, estimated the domestic consumption, in India, at 500,000 tons. This is considerably below the mark, even if India is taken in its limited signification, as including only British subjects. On this estimate the 94,000,000 of British subjects, men, women and children, would not individually consume more than one pound avoirdupois by the month. A fat, hungry Brahmin, at any of the festivals given by the great, will digest for his own share four pounds, without at all embarrassing his stomach.

Assuming the million and a half of tons that find their way into civilized markets to represent an average value at the place of production of £15 per ton, we

have here the representation of £22,500,000 sterling. But this value may fairly be increased by one-fourth.

The whole exportable production of the sugar-growing countries was found to be, in 1844, about 780,000 tons, of which Cuba furnished 200,000 tons. In 1845, notwithstanding Cuba only produced 80,000 tons, the increase from other sources was so considerable (namely :—the British colonial supply 40,000, United States 40,000, Porto Rico 15,000, Brazil 10,000 tons) that the total produce fell very little short of the previous year—having reached 764,000 tons.

The present supply of sugar to the markets of Europe, is nearly as follows :

	Cwt.
England.....	8,000,000
France.....	2,550,000
German League.....	1,350,000
Prussia.....	220,000
Austria, (ten provinces).....	560,000
Belgium.....	294,000
Other States not defined.	

The present DEMAND, according to the estimated consumption per head (28 lbs.) found to exist in England, where taxation is favorable, and the price moderate, would be about 3½ million tons, viz :

	Cwt.
England.....	8,000,000
France.....	8,875,000
Germany.....	5,750,000
Prussia.....	4,100,000
Austria.....	8,642,857
Belgium.....	1,250,000
Russia.....	15,250,000
Rest of Europe.....	12,500,000

The whole annual PRODUCTION of the world is estimated by another party at 1,471,000,000 pounds. Of the whole amount of sugar produced, Europe consumes about 648,700 tons, divided nearly as follows :

	Pounds.
Great Britain.....	803,360,096
France.....	160,080,000
Belgium.....	19,840,000
Netherlands.....	42,000,000
Russia.....	70,000,000
Denmark and Sweden.....	22,000,000
German Zollverein.....	101,300,000
Other parts of Germany.....	160,000,000
Austria.....	50,000,000

1,428,580,096

The following figures show the quantity of raw sugar in general, in tons, imported into the British markets for the last five years, compared with consumption :

Years.	Entire importations.	British consumption.	Surplus.
1847.....	415,289	390,281	125,008
1848.....	354,834	309,424	45,410
1849.....	362,087	299,041	63,046
1850.....	332,470	310,391	22,089
1851.....	419,083	329,561	89,472
1852.....	360,033	358,642	1,391

Deduced from Parliamentary Paper, No. 461, session 1853.

The consumption of sugar then in the whole world may be roughly estimated at two and a half millions tons, of which the United Kingdom may now be put down for 350,000; the rest of Europe 420,000, and the United States 300,000 tons.

The United States produce about 140,000 tons of cane and maple sugar, which are exclusively used for home consumption, the remainder of their requirements being made up by foreign importation. The American consumption, which in 1851 amounted to 133,000 tons of sugar cane reached last year a total of 321,000 tons, almost as much as England consumed—358,000—and more than the consumption of 100,000,000 of persons on the continent.

The whole product of tropical sugar is about one million and a half tons, while the consumption is probably two million tons; but the manufacture of sugar from beet root, maple, and other sources, supplies the deficiency.

The total quantities of sugar, and molasses as sugar, consumed in the United Kingdom in the last six years, were, according to a Parliamentary paper, No. 292, of the last session, as follows:

Years.	Cwt. sugar.	Cwt. molasses.
1847.....	4,723,232	1,256,421
1848.....	5,003,318	865,752
1849.....	5,283,729	1,021,065
1850.....	5,570,461	752,027
1851.....	5,043,872	1,522,405
1852.....	7,203,631	799,942

The returns further specify that the average annual consumption of *British colonial sugar*, in the five years ending 1851, was 5,124,922 cwt.; and in the five years ending 1846, was 4,579,054 cwt.; the average consumption of British colonial sugar, has, therefore, exceeded in the five years since the duties were reduced, in 1846, the average consumption of the five previous years by 545,868 cwt. per annum; or in the aggregate in the five years, the excess has been 3,239,338 cwt. The quantity consumed in the year ending December, 1852, was 4,033,879 cwt.*

THE CULTIVATION OF TOBACCO.

We are indebted for this, and the next article, to the able report on the Agriculture and Geology of Mississippi, by B. L. C. Wailles, State Geologist:

When the country came under the dominion of Spain, a market was opened in New Orleans; a trade in tobacco was established, and a fixed and remunerating price was paid for it, delivered at the king's warehouses. Tobacco thus became the first marketable staple production of Mississippi.†

The tobacco plant, indigenous to the country, soon came into general cultivation.

The larger planters packed it in the usual way in hogsheads. Much of it, however, was put up in carrets, as they were called, resembling in size and form two small sugar-loves united at the larger ends.

The stemmed tobacco was laid smoothly together in that form, coated with wrappers of the extended leaf, enveloped in a cloth, and then firmly compressed by a cord wrapped around the parcel, and which was suffered to remain until the carret acquired the necessary dryness and solidity, when, together with the surrounding cloth, it was removed, and strips of linn-bark were bound around it at proper distances, in such a manner as to secure it from unwrapping and losing its proportions.

* There is frequently a discrepancy in the figures in the Parliamentary papers, which will account for a want of agreement in some of these returns.

† In 1788, Mr. Wm. Dunbar writes: "The soil of Natches is particularly favorable for tobacco, and there are overseers there who will almost engage to produce you between two and three hogsheads to the hand, besides provisions."

The rope used for this purpose was manufactured by the planter, from the inner bark of the linn, or bass-wood, then one of the most common trees of the forest.

One end of the rope was made fast to a post, in front of which the operator, seated with the roll of tobacco on his knee, and his foot against the post, connected the other end with the carret, turning it with his hands while the necessary tension was maintained upon the rope, wrapped it securely and evenly from end to end.

In those days, when the roads were indifferent, and wagons and carts were few, the tobacco hogsheads were frequently geared to a horse by means of a pair of rude temporary shafts, connected with the heading, and in this manner rolled to the shipping point, or to market at Natchez; much being transported in this way from the settlements on Cole's creek, and from greater distances.

To convey the tobacco to market in New Orleans, it was usual for several planters to unite and build a flatboat, with which one of the number would accompany the joint adventure, deliver the tobacco at the public warehouse, and, if it passed inspection, receive the proceeds, and return home by land, generally on foot; the payment being made in a written acknowledgment, or *bon*, as it was called, which entitled the holder to receive the amount from the governor or commandant at Natchez, thus obviating the labor and risk of packing the specie several hundred miles.

The monopoly of the tobacco trade was retained by the King of Spain, and the price paid for all that passed inspection at his warehouses was uniform.

The price was regarded as liberal, and yielded a fair return for its production, whilst the stability and certainty of a market encouraged an increased cultivation; the country began to prosper, and the planters were enabled to make purchases of slaves, the current price of which averaged about three hundred and fifty dollars.

There was no classification in the sale of the tobacco. If the article passed inspection, it was taken, and the quality was generally such *that for that cause* it could not be rejected. Nevertheless, it sometimes happened that an unobjectionable article was left upon the planter's hands, if, from ignorance of established usage, he had omitted the customary *douceur* to the inspector.

This, however, soon came to be better understood. The capacious pockets of the inspector were not worn without a purpose, and the expected purse was habitually dropped into it without at all shocking the moral sense of the wearer.

It was not necessary, or perhaps altogether proper, to couple the offering with expressed conditions; that, if not indelicate, would have been quite superfluous, it being quite safe and effectual to make the silent contribution. Nor was any particular secrecy or concealment at all necessary. This was not considered *brbery*; the king always paid his servants indifferently, and these were but the *perquisites* of office which indemnified the needy official for his poorly requited services.

Whether these usages, reacting upon the producers, had any effect upon the quality or condition of the tobacco in the end, is not, perhaps, altogether clear; but it is certain that, from some cause, either from fraud in packing, the falling off in quality, or from the competition of the Kentucky tobacco introduced into New Orleans, under General Wilkinson's contracts with the Spanish authorities, or by their connivance, the price was so reduced, that the further cultivation of it in Mississippi, for exportation, was, in a few years, wholly abandoned, greatly to the injury and embarrassment of the planters, who had, for the purchase of slaves, contracted debts which they now found it difficult to discharge.

THE CULTIVATION AND PREPARATION OF INDIGO.

The tobacco crop being no longer profitable, indigo, which had been cultivated for some time in Louisiana, was now resorted to.* This most offensive and unwholesome pursuit was nevertheless the most profitable one in which the planter could engage. Seed was obtained at the cost of about fifty dollars per barrel, and some of the small farmers engaged in cultivating the indigo exclusively for

* Indigo had not been cultivated in the Natchez district as late as 1798, and until after the failure of the tobacco business it was produced only for the seed, which was supplied to the Point Coupee and other settlements on the Mississippi.

the seed to supply those whose larger means enabled them to erect the necessary fixtures, and to prosecute the cultivation and manufacture on a profitable scale.

Indigofera tinctoria, from which the indigo pigment of commerce is prepared, said to have been introduced from India, flourishes luxuriantly in the southern States, where a variety termed the *Atramentum anti* is said to grow spontaneously. It was cultivated in drills, and required careful handling when young and tender, the subsequent cultivation being similar to that of the cotton plant.

When mature, in good land, it attained the height of about three feet. It was then, previous to going to seed, cut with a reap-hook from day to day, tied in bundles in quantities suited to the capacity of the steeping-vats, to which it was immediately transferred. These vats or uncovered reservoirs were constructed in pairs above ground, of thick plank dovetailed together in such a manner as to be perfectly water-tight; the larger one, or steeping-vat, so elevated as to permit the draining off of the liquid into the smaller, or beater, in which it is churned or agitated.

This vat was usually about four feet deep, eight feet wide, and about fifteen feet in length. Two or three pairs of these vats were sufficient for the largest indigo establishments in the country. One pair ordinarily sufficed.

The vats were placed near a pond of clear soft water, (spring or *hard* water would not answer,) and the shallower the ponds, and the greater the surface of water exposed to the sun, the better.

Into the steeping-vat the indigo weed, as cut, was thrown, and the water pumped on to it. The steeping generally required a day; but this depended in a great degree upon the temperature of the weather during the process and that of the water used.

When the steeping was carried to the proper point, and the fermentation suffered to continue until all the coloring matter or *grain* was extracted, which was ascertained by examining the liquid in a silver cup, the turbid liquid was drawn off into the beater.

If drawn off prematurely, a loss in the coloring matter, was sustained, and if deferred too long, putrefactive fermentation ensued, which injured the quality of the dye.

Attached to a shaft, revolving across the smaller vat, was a set of arms or paddles, by which the liquid was churned or agitated. In small establishments, the shaft or beater was turned by hand, but generally horse-power was connected with it.

The beating or churning process was continued for several hours, during which the precipitation was aided by adding a small quantity of lime. Other substances were often substituted, however, some using a mucilage obtained from the oca plant, the sassafras, or from a plant known as the moave.

The grain or coloring matter being separated, as ascertained by test with the silver cup, flakes of the pigment being seen spreading or settling on the bottom, it was suffered to subside, and the supernatant liquid was drawn off through a series of holes descending towards the bottom. The indigo deposit was then removed by wooden shovels from the vat into draining-boxes lined with canvas, and placed upon beds of sand, afterwards transferred to moulds lined in like manner, dried in the shade, and cut into cubes.

After undergoing a further curing by being laid on smooth plank shelves, where it underwent a sweat, it was packed in boxes for exportation.

A variety of delicate light blue color was called "floton;" but that termed the "pigeon neck," from its prismatic colors, was most esteemed.

The price obtained for the best quality is variously represented, some affirming that it was from one and a half to two dollars per pound.

A second cutting of the suckers or sprouts was obtained, but the indigo produced from it was of inferior quality.

About one hundred and fifty pounds of indigo are said to have been produced to the hand.

The whole process was of the most disgusting and disagreeable character. Myriads of flies were generated by it, which overspread the whole country. The plant itself, when growing, was infested by swarms of grasshoppers, by which it was sometimes totally destroyed, and the fetor arising from the putrid weed thrown from the vats was intolerable. The drainings from these refuse accumulations into the adjacent streams killed the fish. Those in Second creek, previously abounding in trout and perch, it is said were destroyed in this way.

It is not surprising, therefore, that the cultivation of indigo was abandoned in a few years, and gave way to that of cotton, so remarkable for its freedom from the disagreeable concomitants of tobacco and indigo culture, and comparatively so light, neat, and agreeable in its handling.

HEMP—ONE OF THE GREAT STAPLES OF THE COUNTRY.

The article of hemp has become one of the important staples of the west. The late census report makes the annual aggregate production in the United States upwards of 60,000 tons. This article is one indispensable necessary to our navy and commercial marine. In former years we looked to Russia for the supply; but of late we have become independent of the foreign production, and we now rely mainly upon the American production, as is shown by the statistics of the late census, and more fully by the able and elaborate speech of the Hon. John R. Thomson, of New Jersey, made during the last Congress, before the Senate of the United States, in the case of David Myerle.

It abundantly appears from the evidence produced by Mr. Thomson, in support Mr. Myerle's claim upon the government, for damages sustained by him through a violation of contract in the rejection of his hemp, that in 1839 the Hon. James K. Paulding, then Secretary of the Navy, induced Mr. Myerle, under promise of sustaining him from loss, to embark upon experiments for testing the practicability of supplying the navy with American water-rotted hemp. Some experiments for the purpose had been made under the sanction of the government many years previous; but these had left behind them a general opinion that the operation of water-rotting of hemp was impracticable in our climate, and the object was abandoned.

In an interview had by Mr. Myerle with the Secretary, the subject was mentioned by the latter, when Mr. M. expressed the utmost confidence in the entire practicability and safety of the process, and of the feasibility of successfully overcoming, by a course of proper experiments, the existing deep-rooted prejudices against it. The Secretary concurring in his views and justly considering it an object of the highest consideration, as well as eminently entitled to the patronage and encouragement of the government, he urged him to abandon the business in which he was then engaged, as far as might be necessary, and to enter upon, and carry out, in the heart of the hemp growing region of the west, the experiments necessary to establish both the practicability and safety to health of the process. To induce him to this course, he tendered him the patronage of the government, and made the most liberal promises of encouragement and indemnity against loss; as well as, if successful, the most generous government reward.

The navy commissioners, at the time, fully concurred in the views of the Secretary; also the chairman and several members of the naval committee of the House of Representatives cordially coincided in the same. Under these assurances and promises, and urged by his zeal for the successful accomplishment of the object and wishes of the government, as also by motives of patriotism, he agreed to abandon the lucrative business in which he was at the time engaged, and enter at once upon the experiments proposed. The expenses attendant upon the experiments were all borne by Myerle, and must have been very heavy; almost insuperable difficulties and obstacles, growing out of the deep-rooted prejudices of the people, opposed his initiatory efforts in the matter. His workmen (of whom at one period he had about 200) were difficult to procure, owing to the fear of the effects upon their health, and when obtained at high prices, they had to be instructed in every part of the process of water-rotting and preparing the hemp for market.

At the close of 1840, it seems his efforts had demonstrated the entire practicability of carrying on the process without serious detriment to health, and so complete was the change of public opinion on this point, founded in the actual experiments and the evidence of their own senses, that a great number of the most respectable planters entered into an agreement with him to furnish him with the water-rotted article, some engaging to furnish as much as 100 tons. These experiments, it appears, were commenced in Kentucky; this State, at that period, being the only one that cultivated this article to any considerable extent, (which, by the way, it may be stated, was of very inferior quality, and unfit for naval

purposes,) the annual production not exceeding 1,500 tons. The eminent success attending Mr. M.'s experiments was soon noised through the western States, as a result of which, the annual production in 1846 had increased to 30,000 tons. The first difficulty in subduing the prejudices of the people having been overcome, he produced, at great expense, and forwarded to Boston upwards of 200 tons of the article for the navy of the United States, and was prepared to fulfil his contract for 500 tons, which he would have done had he not been disabled and ruined by its improper, if not corrupt, rejection by the inspector. In regard to this, the testimony of Mr. Paulding, Commodore Nicholson, and others, seems conclusive. A great prejudice, at the time, existed against American hemp, such as from time to time, in very limited quantities, had been sent to the Boston market, from the fact of its having been badly prepared, and of very inferior quality of dew-rotted. This created a prejudice against the article when furnished by Myerle. But after its rejection, and its sacrifice, at ruinous prices, the manufacturers who purchased it, having proved its quality, the prejudices previously existing was overcome, and the production of American water-rotted hemp was established, and can never be abandoned. This great branch of American interest was thus established; the nation reaped the rich fruits of Mr. Myerle's skill, perseverance, energy, seven years' toil, losses and sacrifices; but he was entirely ruined (through the rejection of his hemp with also the neglect of his business) to establish it. In conferring this great benefit upon his country, he has saved to the government, in the difference between the price of Russian and American hemp, four times the amount of his claim, besides millions of dollars to the nation by the substitution of a domestic for a foreign article of indispensable necessity for the naval as well as the mercantile marine of our Union.

An extensive eastern manufacturer says: "If there were no hemp raised in the United States, it would be impossible to obtain a supply equal to our necessity, if all Europe were open to us. The American hemp is of a quality that answers all the purposes for which the Russian is used; and in regard to the power of bearing a dead strain it is much superior."

It is also known that there is a large demand for American hemp for manufacturing purposes, say for canvas, duck, and coarse fabrics; many factories for the manufacture of these articles have been established in this country since the year 1840, and our shipping is entirely clothed with the American production. Moreover, previous to the above time, the importation of Russian hemp amounted annually to 6,000 tons, whereas, in the year 1844 the importation had fallen off to a few hundred tons, in consequence of the introduction of American hemp. It cannot be questioned but that this state of prosperity was produced through the instrumentality of Mr. Myerle's efforts in behalf of this great American interest. We have also before us the fact that our government is now making their purchases of American water-rotted hemp for the use of the navy, at the price of \$280 per ton, while at this time Russian hemp is quoted at \$400 per ton in our market, and the quantity very limited. The consumption of hemp for our mercantile marine annually amounts to 15,000 tons, and nineteen-twentieths of the American hemp is used for one-twentieth of the Russian. The government requires annually from six to eight hundred tons for the navy. It also appears that Mr. Myerle not only established the mode of water-rotting, but also, that, through his instructions, the culture of hemp has been greatly improved in its quality; that large quantities of dew-rotted hemp command a market at remunerating prices to the producer in the eastern ports of our country; as well, also, large shipments are made to Europe.

What would be the condition of our country, as regards the supply of this article, (so essential to our navy and commercial marine, if we were depending on the foreign production,) in a state of war on our part with Europe, although Russia might stand towards us as a neutral power at such a time? It must be apparent to every mind that the Baltic would be closed against our commerce, and that if Russia attempted to furnish us with her production she would have to run the gauntlet; hemp being a contraband article, by the law of nations it would be subject to seizure and confiscation, and our supply would be entirely cut off. But look at the present state of things; we are beyond all fear of being thrown under this embarrassing position, as happened in the war of 1812, when there was no raw material to supply our navy and mercantile marine. From the facts set forth by the honorable senator from New Jersey, in his speech, we have come to the conclusion that Mr. Myerle has conferred a great benefit on his country, and

that it owes him a debt of gratitude, and especially a full remuneration for his losses and time spent in the prosecution of this enterprise; that, (for it is in proof that he has lost seventeen years of the prime of his life, including the time occupied in prosecuting his claim,) as up to this period he has not received one dollar remuneration for the great losses incurred by the rejection of his hemp, the destruction of his regular business, and his loss of property and time, it is also evident that if he had not engaged in the enterprise he would have been at this time a wealthy man.

We remark in closing that republics have been charged with being ungrateful, but that, although this is often the case, we shall hope, in the present instance, the observation of a late distinguished statesman, "Truth is mighty, and public justice is slow, but certain," will prove the more correct of the two assertions. •

LATE BOOKS, EDITORIAL, ETC.

1. *Life in California*.—Mountains and Mole Hills, by Frank Marryatt, illustrated by the author; New York, Harper & Brothers, 1855. A most interesting work indeed. There are chapters entitled, Where the gold comes from—Bar Room in California—John Chinaman—The Feast of Lanterns—The Miner's grave—Horse auction at Sonora—Camping out—all very amusing, as are also the illustrations.

2. *Letters to the Right Reverend John Hughes*, Roman Catholic Bishop, enlarged and revised by Kirwan. Having gone through large editions in the United States, and reprints in Europe, and even in India, the work of Kirwan again appears from the press of Harper & Brothers, New York, (1855.)

3. *Speeches and addresses by Henry W. Hilliard*: New York, Harper & Brothers, 1855. A large part of these were delivered in Congress, of which Mr. Hilliard was a distinguished member from Alabama, and he has dedicated the whole, with many fine literary efforts, to the Hon. W. C. Preston, of South Carolina.


4. *Reports, Explorations and Surveys of a Railroad Route from the Mississippi*

river to the Pacific ocean, made under the direction of the Secretary of War, 1853-'54, according to acts of Congress. We are indebted to Mr. Campbell, of the War office, for a copy, and will hereafter analyse it minutely.

5. *Catalogue of Patents granted by Patent Office prior to 1855*. We are indebted to the author, J. S. Brown, A. M., Washington, D. C., for a copy of this most laborious and valuable pamphlet.

6. *Speech of the Hon. P. A. Rost, of Louisiana*: A noble defence of religious toleration and of our institutions.

7. *Speech of Judge Gayarre, of Louisiana, to be delivered at the Know Nothing Convention of Philadelphia*. Judge Gayarré being a Catholic was ruled out. In this printed speech he shows with great eloquence and power the evils of religious intolerance, and how the salvation of the country depends upon its freedom of thought and opinion. In our next number we shall publish an excellent review of Mr. Gayarré's History of Spanish Domination in Louisiana, written by Mann Butler, of Missouri. It is too late for this number.

 *Subscribers will read remarks on fourth page of Cover.*

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DE BOW'S REVIEW.

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LITERARY AND MISCELLANEOUS JOURNAL.

STATISTICAL VIEW OF THE STATE OF ILLINOIS.*

PART I.

GENERAL ASPECT—CENTRAL POSITION OF ILLINOIS—TERRITORIAL EXTENT OF SEVEN LARGEST STATES—COMPARED WITH OTHER STATES AND EUROPEAN COUNTRIES—MANUFACTURES OF RHODE ISLAND AND SOUTH CAROLINA COMPARED—MISSISSIPPI VALLEY—RIVERS—TEMPERATURE—ADVANTAGES OF LOCATION OF ILLINOIS, ETC., ETC.

The United States, occupying the middle portion of North America, and stretching across the continent 2,900 miles, and containing 3,260,000 square miles, is divided into three distinct regions, the Atlantic slope, the valley of the Mississippi, which may be considered as extending from the Alleghanies to the lofty summits of the Rocky mountains, and the transmontane, or country lying between the Rocky mountains and the Pacific ocean. In these grand divisions, considered without reference to the north or south, there is every variety of soil, climate, production, and scenery—magnificent rivers, great inland seas, inexhaustible agricultural and mineral resources, and all the elements of national wealth, independence, and greatness. The confederacy enjoys, by an extended coast of about 3,000 miles on the east and south, every facility for commercial intercourse with Europe, Mexico, and the Atlantic States of South America, and by a sea-coast of something over 1,500 miles on the Pacific, like facilities of free intercourse with Asia and all that portion of the globe. Commercial men esteem it a settled question that the larger part of what has been known for so many ages as the eastern trade will be diverted to our

* We are indebted to the author, John Lewis Peyton, Esq., Chicago, for this invaluable paper, which will be published in parts in the Review.

western shore and across the continent through the United States. The rapid settlement of California and Australia, with their increasing commercial relations and those of all the countries lying on both sides of the Pacific, taken in connexion with the onward progress of improvement in this country, lead unerringly to this conclusion. It is difficult to estimate the advantages which will accrue to the United States from such a trade, and the splendid destiny of a country with such vast resources, and by whose enlightened policy every quarter of the globe is made to contribute to its substantial wealth, advancement, and prosperity.

The State of Illinois is in the centre, or, I should rather say, is centrally situated in this wide-spread country, and from the peculiar advantages of her position, enjoys the trade of an immense region, and free, easy, and natural means of communication with almost every part of the Union. Her northeastern boundary for fifty miles is upon Lake Michigan, which gives her a valuable trade with the lake country of the north and the Canadas, and the means of communicating through the St. Lawrence with all the world.

As a physical section, Illinois occupies the lower section of an inclined plane of which Lake Michigan and both its shores are the higher sections. This plane, falling off from its upper sections, embraces much the larger part of Indiana. The lowest section of the plain is at Cairo, which is 340 feet above tide-water in the Gulf of Mexico. The extreme arable elevation of the State may be stated as 800 feet above tide-water, and the mean height of 550 feet. The periphery of the State is 1,150 miles, two-thirds of which is made by navigable streams. Her greatest length, which is on the meridian line of Cairo, is 378 miles, and her greatest width, which occurs on the parallel of Danville, is 212 miles, and she contains an area of 55,405 square miles. This gives her, as to territorial extent, the eighth rank among the States of the Union. The seven larger States are:

	Square miles.		Square miles.
Virginia, whose area is.....	61,852	Michigan.....	56,243
Georgia.....	58,000	California.....	188,981
Florida.....	59,268	Texas.....	237,321
Missouri.....	67,580		

She is more than forty-two times larger than Rhode Island, and is but 10,720 square miles less in extent than the six New England States. She is, then, one of the first States of the American Union in size, and will occupy among those States a more prominent position when California shall have been divided, of which there is very little doubt, and

when five new States have been erected out of the domain of Texas, for which provision was made in the joint resolutions of annexation. Her influence in the national councils will always be felt—a leading State, her voice will always be heard with interest and respect.

Considered with reference to European powers, she has 5,018 square miles more of territory than England, is equal in extent to the united territories of Holland, Belgium, and Portugal, and is more than twice as large as Denmark, including Holstein and Luneburgh. She only ceases to be in extent a great empire when compared with such colossal powers as our whole Union of States, Russia, France, and governments of similar size. But it has been well said, "It is not the immense extent of a territory, happily, which constitutes the grandeur of a State; for example, the United provinces of Holland, after having thrown off the yoke of Philip II., the most powerful king of his age, sustained with advantage a contest against Louis XIV., and, having conquered vast distant provinces, has since given a new destiny and high prosperity to a small kingdom. See, also, England, who started out with a territory of less than 150,000 kilom. (square) and now rules over millions."

This fact is so well established as scarcely to justify being illustrated, but the remarkable results which have been obtained by the indomitable enterprise and industry of the people in an inhospitable climate and upon a flinty soil, as contrasted with those obtained in a genial climate and on a generous soil, will justify the introduction of the following facts as to the States of Rhode Island and South Carolina, and settled beyond a cavil or a doubt the true grounds upon which a State must rely for its greatness. The manufactures of Rhode Island are more valuable than the manufactures and cotton of South Carolina. Thus—

Rhode Island manufactures.....	\$8,640,626
South Carolina manufactures.....	2,248,915
South Carolina raises cotton to value of.....	4,628,270

The population of Rhode Island is but 147,545, while that of South Carolina is 668,507. The area of Rhode Island is but 1,306 square miles, while that of South Carolina is 29,000.

Illinois is traversed by no ranges of hills or mountains, and is, with the two exceptions of Delaware and Louisiana, the most level of the United States. The southern portion, however, is hilly, and there are many high and abrupt bluffs upon the Illinois and Mississippi rivers. Prairies are not so numerous or extensive east of the Mississippi as west, south of the Ohio as north, but Illinois is emphatically a prairie

State. There is but one prairie west of the Mississippi larger than Grand Prairie in this State—none of greater fertility. This prairie has its southern commencement in Jackson county, and extends, varying in width from one to twelve miles, north through the counties of Perry, Washington, Jefferson, Marion, Fayette, Effingham, Cumberland, Coles, Champaign, and Iroquois, where it connects with the prairies that project east from the Illinois river. Prairie is a French word signifying a meadow or pasture ground. In the west they are divided into those that are flat and those that are rolling. The soil of both is deep, friable, and of unexampled fertility. The flat present in summer an expanse of green grass as boundless as the ocean, and the effect is magnificent when the tall grass is bent to and fro by the winds. Like all plains, they are monotonous, and especially desolate and dreary when covered with snow or blackened by recent conflagration. Their aspect is varied, and even picturesque, when there is a large growth of uneven and scattered timber, following the streams that pass through them, which creates the impression that there are inequalities of surface.

The rolling prairies, as they spread out before you, in their vastness resemble the waves of the ocean after a storm. Between the "swells," which vary in height from twenty to sixty feet, there are are sloughs, or sections of wet and marshy ground; when ditched a running stream is produced and the ground is ready for the plough. For the most part, they are interspersed with woodlands or solitary clumps of trees, which give them a diversified and beautiful appearance. They are covered during the spring and summer with an endless variety of bright and beautiful flowers. There have been many conjectures and theories as to the manner in which the prairies were formed. The indications are very conclusive that Illinois was once covered with water—was once the bottom of a great lake. The writer of the following lines has fallen, in my opinion, upon the true origin of the rich alluvions of the Mississippi valley and the contiguous prairies.

"There is no question that the richest soil in the United States is to be found in the Mississippi valley. There is not, as in so many other cases, a thin covering over the clay, the sand, the gravel, the chalk, or the rock; but the deposit of ages, effected by the constant operation of mighty agencies. In some cases the rich black mould is found as much as a hundred feet deep, and when turned up is as light and free as the driven snow. The pedestrian, as he walks over it, can, in most instances, sink his cane to the very head of it. Nor

is it any wonder that it should be found so deep, when we consider that the vast desert which intervenes between the Mississippi and the Rocky mountains has been gradually despoiled, that this rich deposit should be made in the lower portions of the valley. The great plain, which, commencing some hundreds of miles to the west of the river, slopes gently up toward the mountains, has been gradually denuded of its soil, nothing being now left upon it but the dry sand, through which the rocks project as the bones sometimes protrude through the skin, the whole looking like the cadaverer of what was once a fertile region."

The entire northern portion of the State is composed of rolling prairies, dispersed with timber. The State of Illinois has been divided and arranged under three general heads: First, the alluvions of the rivers, which are from one to eight miles in width, in some places elevated and in others low and subject to inundation. They consist of an intermixture of wood and prairie. The most remarkable of these alluvions, from its extent and the depth of its soil, is known as the American bottom, which name it derived from having once been the western boundary of the United States. It commences at the mouth of the Kaskaskia river, and runs up the Mississippi between 80 and 100 miles to the mouth of the Missouri. It is bounded on the east by a continuous bluff, varying in height from 50 to 200 feet. Its area is 450 square miles, or 288,000 square acres. Along the bank of the Mississippi there is a growth of timber, with an exceedingly thick undergrowth from a half to two miles in width. Second, after leaving the alluvions and the rising bluffs that bind them, there is a tract of level country elevated from 50 to 100 feet, which is sometimes called table-land. The greater proportion of this is called prairie, which is sometimes dry and at others wet and marshy, depending on the convexity or concavity of the surface. Third, the hilly and broken sections, consisting of intermixtures of woods and prairies, the soil in places being indifferent, as in portions of Fayette and Clark counties. Cook county deserves to be mentioned in this connexion, as it neither, properly speaking, is prairie or alluvion, and does not come under the third general head in the foregoing classification. It is more level than the genuine prairie, less fertile. owing to the presence of large quantities of sand, and resembles the low districts or salt marshes of the sea-coast. The nature of the soil, and the traces left for some distance in the interior, have led to the conclusion that the lake at no distant day swept over it. Though these lands be not of equal fertility with others in

the State, they have been successfully reduced into cultivation, and are highly productive.

The alluvions constitute a considerable part of the territory of the State, as may be readily conjectured from the number of streams. It is a source of regret that there is no sufficient data for ascertaining their exact extent, but a tolerably correct idea will be derived from a view of the large number of rivers in the State. Much the largest of these is the Illinois, an Indian name signifying THE RIVER OF MEN. It is formed by the Des Plaines and Kankakee, some fifty miles southwest of Chicago, and after pursuing a course in this direction 500 miles, empties into the Mississippi 25 miles above the mouth of the Missouri. The current below the mouth of the Vermillion is gentle, the bed is wide and deep, and the navigation good during the whole summer. It spreads out into a beautiful lake called "Peoria," about 200 miles from its mouth. The banks are uniformly low to the mouth of Spoon river. The alluvions are bounded by high bluffs consisting of perpendicular ledges of rocks from 200 to 300 feet in height.

It receives the Fox, Aux Sable, and Little Vermillion rivers, and Crooked creek, and other streams of less note, from the north, and the Vermillion, Mackinaw, Sangamon, and other streams, from the south.

The Fox river is a clear and beautiful stream, which rises near Lake Michigan, and pursues a southwest course to the Illinois.

The Kankakee is a large and navigable stream, but near the State line it loses itself in a marsh.

Rock river rises in Wisconsin and pursues a westerly course 300 miles, emptying into the Mississippi 300 miles above the mouth of the Illinois. It is a beautiful stream, and the lands upon it are very fertile.

The Kaskaskia is a large stream rising in the southeastern part of the State, near the head waters of the Embarras, and runs in a southwestern direction and enters the Mississippi about 100 miles above the Ohio. It has numerous tributaries, of which the principal are Lost, Crooked, Elkhorn, and Plum creeks, Fort river, Hurricane fork, Shoal, Sugar, Silver, Richland, and Horse creeks. The river is navigable 150 miles to Vandalia in high water. Its banks and those of its tributaries are generally fertile. The Little Wabash has a course of 150 miles. The banks are very fertile, but subject to excessive inundation. The country between it and Skillet fork is particularly liable to inundation, and is in many places low and marshy, so that the water remains on

it during the whole season. In autumn the stream is very low and sluggish.

The Embarras river is a navigable stream, the banks of which are flat and subject to inundation, but very fertile and heavily timbered. Spoon river is a large and beautiful stream. - The land on this river is high and undulating, well watered, and handsomely diversified with timber and prairie. It is considered one of the most eligible sections in the northern part of the State.

The Sangamon is a large stream, emptying into the Illinois, 130 miles above its mouth. It is about 150 miles in length. The lands bordering on it and its tributaries are uncommonly fertile.

The Big Muddy runs through a fine prairie country. It is navigable about fifty miles, and empties into the Mississippi about sixty miles above its junction with the Ohio.

In addition to these streams there are one hundred and ten or twenty others, not enumerated, whose banks are alluvial deposits. It is safe to affirm that there is not in this country a territory of similar extent and equal fertility, nor is there on the face of the globe any like quantity of land of greater resources. This fact will be fully demonstrated in a future number, by a reference to its productions, agricultural and mineral.

Lying between latitudes 37° and $42^{\circ} 30'$ north and longitudes $87^{\circ} 49'$ and $91^{\circ} 28'$ from Greenwich, Illinois has a climate differing with the different parts of the State. Every flat country is subject to extremes of temperature, unless it be surrounded by modifying circumstances. This is the case with Illinois. The causes which operate to correct the extremes of weather in the State are two great ranges of mountains on either side of the Mississippi valley, and the chain of lakes extending to the frozen regions of the north.

In a State of such size, stretching through five degrees of latitude, there is a wide difference between the climate of the north and south. In southern Illinois the climate is exceedingly mild and pleasant, except for a short time in summer, when the sun is very powerful and the heat extremely enervating. Fruits, wines, and almost every production of the soil which delights in a warm climate, flourish here. In middle Illinois the climate is delightful, owing to the exhilarating breezes which prevail during the whole summer from the northwest. During the most oppressive weather of the summer the nights are cool and bracing—the thermometer sinking at night to sixty degrees, and frequently

below, when during the day it has stood as high as 96 and 100 degrees.

The following results, drawn from three years' observations made upon the state of the thermometer near the centre of the State, furnish a correct idea of the temperature through the entire year for this region:

Mean temperature for the 1st year.....	55° 52'
" " 2d year.....	56° 98'
" " 3d year.....	56° 18'
Mean temperature for the three years.....	56½

Mean temperature for each month during the above years.

January.....	30° 62'	May.....	62° 66'	September....	70° 10'
February.....	38° 65'	June.....	74° 47'	October.....	59° 00'
March.....	43° 13'	July.....	78° 66'	November....	53° 63'
April.....	58° 47'	August.....	72° 88'	December....	34° 33'

Statement showing the annual range of the thermometer.

1st year—Lowest....	5° below zero.	Highest....	101°	Range....	96°
2d year—Lowest....	8° below zero.	Highest....	96°	Range....	88°
3d year—Lowest....	6° below zero.	Highest....	100°	Range....	94°

Average monthly range during these years.

	Deg.	Range	Deg.		Deg.	Range	Deg.
January...	3 to 59	Range... 56	July.....	61 to 99	Range... 38		
February..	6 74	" ... 68	August... 59	96	" ... 37		
March....	16 73	" ... 57	Sept.....	40 92	" ... 50		
April.....	32 83	" ... 51	October... 24	81	" ... 57		
May.....	43 89	" ... 46	November. 37	78	" ... 41		
June.....	52 94	" ... 42	December. 19	63	" ... 44		

Mean temperature of the different seasons.

Winter.....	34° 53'	Summer.....	75° 34'
Spring.....	54° 74'	Autumn.....	60° 77'

The winter generally commences about the middle of December, and continues till the middle of February. In the same latitude, west of the Alleghanies, the climate is milder than it is east. In the winters of 1819 and 1820, the Mississippi at St. Louis was covered with ice for two months; but this is very unusual. In the winters of 1851, 1852, 1853, and 1854, it was covered over, but not during the winter.

In northern Illinois, the springs are wet and disagreeable, the summers pleasant, the autumns excellent, but the winters extremely cold. There is not, during the winter, a great fall of snow; nor is it the extremity of the cold which makes the weather so disagreeable, but the perpetual winds which blow from almost every quarter over the open country. The winds, when from the lake, can be borne; but from the prairies, they are icy, freezing, merciless.

The following meteorological observations, taken in Hancock county, during three years, give the following large proportion of fair to rainy days:

	Fair days.	Cloudy.	Rainy.	Snow.
First year.....	246	74	42	3
Second year.....	250	67	43	5
Third year.....	229	98	48	10

With such a display of figures, it ceases to be remarkable that this climate is regarded as one of the mildest and most agreeable in the northern portion of the country.

About the middle of October or first of November, the Indian summer commences, and continues from fifteen to twenty days. During this season the weather is dull and cheerless, the atmosphere is smoky, and the sun and moon are sometimes almost totally obscured.

Notwithstanding, then, the varieties of her climate—its severity during the winter at the north, and the enervating heat of the summer at the south—Illinois may be regarded as having one of the most desirable and favored climates of the States in the Union.

With all the advantages of her fine situation—an empire in extent—the richest portion of the richest country in the world—with navigable streams on every border, and penetrating her remotest sections—rapidly increasing her population with an industrious, enterprising, and educated class of citizens—can any one doubt her future position of empire in that great valley fated to control the destinies of our republic?

MEDICAL TOPOGRAPHY OF FLORIDA.*

The relation of a country's physical characteristics, to the generation of disease, has ever impressed the mind of the most casual and superficial observer; for though, on reference to the nosological catalogue, we find the disturbing causes of a physiological equilibrium often universally manifested, how frequently comes the conviction that others have only "a local habitation and a name."

Marked deficiencies in the sanitary materials of the Switzer's soil make him the melancholy victim of goitre and cretinism, whilst frambœsia derives its existence from the torrid atmosphere of Africa, and pellagra is in time annihilated, unless afflicting the victim in its birth-place—Lombardy. The dogma, as old as the days of Hippocrates, that the soil of each country furnishes, through its vegetable or mineral kingdom, an antidote for the diseases peculiarly incidental to it, experience has so far failed in verifying, but we have ample testimony for proving, that though the remedy be not always indigenous, the diseases unfortunately are

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so most frequently. We see this, that physical causes are abundantly sufficient, in many countries, for the *origination* of disease, and establishing this point, it is far more evident, that the comparative presence, or absence, of these causes is capable of modifying the various forms of disease as already existing. This is entirely the case, whether as applied to diseases existing elsewhere, and artificially introduced, or to the analogue of these diseases, locally developed, from causes in essence similar to those which first originated them. It is in this connexion that the medical topography of this State becomes interesting; not from the presentation of causes, as productive *endemic* diseases, but from such as appear to mitigate and modify certain manifestations of disease, whether of foreign or indigenous origin. Such modification being the effect of causes peculiarly and strictly appertaining to the physical characteristics of the country, it is necessary that these be strictly analyzed and carefully reviewed.

Florida (so called, not as is generally supposed, from its being the land of flowers, but from Pasqua Florida or Palm Sunday, the day on which it was, in 1512, discovered by Ponce de Leon) is a peninsula, forming the extreme south-east boundary of the United States; its boundaries by latitude being 25° to 31° north, and by longitude $80^{\circ} 25'$ to $87^{\circ} 20'$ west. This is its present extent, but in former years it included much of all that territory north of it on the Atlantic coast. The Carolinas, deriving their name from the French, (attempting colonization during the reign of Charles IX,) were once included in the limits of Florida. Its western boundary reached once as far as the Mississippi, and the St. Mary's river marked its northern terminus; but "old things have passed away," and this State, reduced to its present modest limits, came into the hands of our government in 1821. Geologists have ascribed to Florida a comparatively recent terrestrial existence: and this State, long held under the enfeebled yet jealous sway of the still proud Castilian, now rapidly advancing, under the impulse of characteristic Anglo-American energy, in the march of civilization and refinement, is the perfect and beautiful fabric which the wondrous and mysterious labor of the insignificant coral insect has raised into a visible existence. Once the theatre exhibiting the melancholy spectacle of Spanish inactivity and agricultural impotence, now a created and substantial testimony of American enterprise and prospective perfection—this, one among the last reluctantly detached gems from the coronet of Spain, stands star-represented in the galaxy of America.

Florida, it is believed, stands a terrestrial temple, supported

on pillars and arches of enduring coral. A narrow peninsula, laved on its eastern shore by the Atlantic, and on its western by the Gulf of Mexico, we could not expect to find its surface either highly elevated or by mountains diversified. Ten miles, accordingly, as we advance inwardly from either shore, the country is flat and sandy; the peculiar forest growth of such a soil, the yellow pine, stretches away in the interminable distance; occasionally here, as in the interior, we meet with elevated tables, denominated on this account *hummock lands*, which, from their extreme value, give an agricultural interest to those sections in which they are found; progressing still onward, we come at last to the most elevated, diversified and valuable regions of the State, known as Middle Florida. We have thus taken a rapid and cursory view of the country, but it is necessary to select the characteristics common to all, and peculiar to some of its regions, that by description and review we may better be enabled to discover and appreciate those causes which are of special interest and importance in the medical history of the State.

The *general* character of the Florida soil is light and sandy; not calculated to sustain a continued and exhausted system of cropping. Those who come with this intention, after a few years of varied success, are soon compelled to take up the march still further westward, and leave in the comparatively barren and exhausted soil behind a melancholy testimony of agricultural ignorance and folly; a cause of just contumely and reproach from the better informed who may succeed them. The pine lands of eastern Florida are generally barren, unless in some rare sections, where limestone abounds; such regions are of medical interest, and to them we will in time allude.

The pine regions are covered generally with what is known as the "wire grass," an unfailing indication of poverty; the dwarf palmetto is also a marked and accompanying characteristic of such soils. The peninsula is almost entirely *skirted* with this peculiar kind of land and superincumbent growth. The hummock lands are disseminated indiscriminately throughout the State, and are of universal interest, whether to the agriculturist, the botanist, or the lover of the picturesque. These lands are of two kinds, the grey and the clay; the former are soon exhausted, but the latter, in their character of durability and strength, simulate alluvial soils. Both have attracted the chief attention of the traveler, for in them is vegetation most rank, luxuriant, diversified and beautiful. One realizes, upon entering a hummock, the astuteness of the savage in making such a locality the the-

atre of his covert, concealed, and deadly mode of warfare. Here the bright, dazzling and sickening light of a summer's mid-day sun is converted into the picturesque, refreshing and soul-breathing shade of a welcome twilight; here, the shades of night anticipate the closing hours of day, and ere light has yet *passed* from the earth, here is "the blackness of utter darkness" rendered visible.

This digression, for the purpose of describing the physique of a country, may seem useless and the object irrelevant, but the conviction would otherwise soon come, that a suppression of this information must render a thorough appreciation of pathologic causation at least obscure and perhaps impossible. Proceeding then in the discussion, we come next to the alluvial regions. Though Florida, on a glance at the map, appears sectionized by courses and bodies of water, and is thus really subdivided, yet in no State in its latitude would we perhaps meet *with less alluvial soil*. There are inland and river swamps, but the former are few in number and small, if we except the great Ouaquephenogaw, (in the northern part of the State, and nearly three hundred miles in circumference,) whilst the latter seldom occur, and are always quite limited in size. This is due to a combination of causes; the country, though generally low, little elevated, and in no part mountainous, is still broken by a multiplicity of small hills and valleys, and as the streams naturally select these last—following them continuously and tortuously to the seaboard—they are necessarily pent up, and, rarely overflowing their boundaries, present no practicability of deposit. The waters flowing as a rule over sandy soil are generally clear, and when, in time of heavy rains, the streams becoming swollen overleap their banks, (though the temporary overflow may in very scattered localities injure vegetation,) and thus give rise to organic decomposition after "the subsidence of the waters," yet, as is evident from their beautiful and characteristic transparency, there can rarely be a possibility of alluvial formation. This overflow occurs but in few localities, and in these but rarely; the waters soon return into their natural channels and the adjacent country to a state of highland growth. Some of these rivers are not by these physical causes thus confined, but their overflow is of short duration, and their waters of such transparency and low specific gravity that the character of the contiguous vegetable growth is unaffected and unaltered. It is a matter of extreme doubt, whether the waters in most of the rivers would ever be the cause of deposits, however long superjacent or stagnant, for their extreme and characteristic transpar-

ency negatives such a possibility. We see thus that the alluvial formation in this State is not only comparatively, but absolutely small, and that, in all probability, such will ever be the case; we may safely expect, and even predict, that it will in successive years grow less, as a more liberal and general system of drainage, with other methods of internal improvement, becomes generalized. The ordinary operations of farming will slowly but surely contribute to this end; the plough alone, yearly and constantly increasing the surface of absorption, is no insignificant productive cause of this desired effect. Torrents of water, once running headlong down naked hillsides, rendering them unproductive, barren and valueless, accumulating in valleys, and inducing sickness through the medium of a necessarily produced decomposition, are now by the agency of this instrumental agriculture restrained and absorbed. Lands fast verging on ruin and worthlessness have thus been rescued, and the cause of the destruction converted into a blessing. The indirect but sure agency of disease is thus checked and annihilated; the element which in former years brought blight to the land, sickness, death and distress to its tillers, is by this simple means made to accomplish the beneficent object of its mission; naked hillsides and pestiferous valleys now refresh and gladden the eye, clothed in the beauty of verdure; wealth abounds and health smiles where want desolated and death once destroyed.

Whilst on the subject of alluvial formations, we cannot omit mentioning a circumstance singularly apposite in establishing the truth of what has been stated. A gentleman of middle Florida, having purchased an extensive tract of land many years since, was pleased to find thereon a very large body of water without an apparent outlet. A short time after settling, he had a large canoe made for the especial purpose of enjoying the advantages and pleasures of his supposed fishery. His servant was directed, after the launch, to take hook and line and go forth in search of the coveted luxury for the forthcoming meal, but after a laborious day spent on the lake, he returned and reported that the depth of water was in most places insufficient for floating his craft, and that, apparently, there was not a fish existing therein. Curiosity now excited, a party was made up for exploring this inland wonder, and after close and patient examination the report of the servant was verified. The water was singularly transparent, and revealed beneath an apparently dark brown and richly composed soil. The idea of agricultural wealth and profit was now in the ascendancy; during

the next season the lake was carefully, thoroughly, expensively drained, and a variety of grain experimentally sown. To the astonishment of the owner, the vegetation was not as good as that on his poorest pine-lands, and the yield not sufficient to compensate him for the trouble of tillage. The dried soil was now examined, and proved to be nothing more than the desiccated remains of aquatic vegetation once luxuriant in the waters of the lake. Nothing similar to that rich and stimulating alluvium, characteristic of the river bottoms in the Carolinas. It was about as rich as a collection of dried oak leaves and about as valuable. When exposed to the fire, it burnt as readily as the ordinary decadentia of our pine forests; more slowly, however, and in this respect resembling peat. If treated as peat now is done with lime, and after a lapse of time thoroughly incorporated with the subjacent soil, by means of repeating ploughing, etc., this mass might be turned to a valuable account. It completely wanted the medical characteristics of ordinary alluvium, for the negroes, residing not more than a half mile distant and exposed to the western, southern, and their intermediate winds, which, for the most time, swept this drained and exposed surface, have never suffered. There is another cause which prevents the extensive accumulations of water in this State, and indirectly alluvial deposits, with consequent sickness. As if in perfect verification of the coral theory, relative to the originated existence of this State, many rivers and very large streams have subterranean exits; water which is collected from the adjacent country in their channels and exposed to view for a time, suddenly disappear, and of their further destiny nothing is ever known. The mysterious depressions of the soil, known as "lime sinks," and scattered with a general indiscrimination throughout the country, point to the real character of its subjacent formation. Some of these "lime sinks" are really beautiful; tops of large trees, growing in the depths below, are often seen on a level with the surrounding country. Water is most commonly found in these terrestrial concaves, and where existing seldom varies in extent of surface and depth. Many have been explored, in a few the depth of water has been ascertained, but the majority are fathomless. The lakes of Florida differ very little from these "lime sinks;" their banks are not as abrupt, (the lands shelving gradually to the water's margin,) and their size not so limited. These in the main constitute the points of difference. The "lime sinks" and lakes are characterized by that partly incomprehensible extremity of depth; this is very generally the case, yet not over the entire

extent of surface. Where the bottoms have been explored, they are usually sandy, little aquatic vegetation is manifested and less alluvium. Their localities are seldom sickly, and the inhabitants select frequently, as sites for their dwellings, spots immediately adjacent. This is quite a feature in the settling of the country, appropriate and agreeable; there seems, so far, to be no attendant danger, and the effect is striking and picturesque. The most expensive and gorgeous structures, perfect in taste, style and adornment, are frequent and common throughout the southern States, but the invariable absence of water detracts painfully from those surrounding "views," which would otherwise be perfect. This fact must have been apparent to every one visiting and enjoying the hospitalities of our country residences in the south; without water few scenes, whether natural or artificial can be perfect, and the absence of this very desirable and essential element of landscape not only injures, but frequently destroys those pictures which the artist Nature renders otherwise perfect. For the absolutely beautiful, in a view, it is an indispensable requisite. These lakes, with few exceptions, never interfere with the health of the surrounding country, and when in future years civilization and refinement shall have reached their acmé, habitations thus located and improved will be pervaded by an almost Italian air.

The springs of Florida, infinite in number, interest and variety, will be fully described when treating of the diseases of the State; and it will be more appropriate to consider them in connexion with those diseases which are either removed or mitigated when subjected to their influences. There is a species of "marsh called *galen*, consisting of water courses covered with spongy earth, and trembling for a considerable distance about the spot impressed." This is, it is understood, peculiar to the southern part of the peninsula, and in much of the country now inhabited by the Indians; but as little is known respecting it, we must content ourselves, for the present, with this bare mention of its existence. After a *brief* description of the *prairies* of Florida and the principal cities, we will enter fully into our subject, as we will then have described, *as far as is necessary*, those physical portions of the State which bear a close relation to its diseases.

The new metal aluminum is now said to be an unquestioned conquest of science, and may be produced in any quantity for three dollars a pound. Further improvements are expected to reduce its cost to fifty cents, when it will naturally replace iron in many household and familiar utensils.

Nativities of the Inhabitants of the Leading Cities of the United States—1850.

Cities.	Born in the United States.													
	In city or rest of same State.	Alabama.	Columbia, District of.	Connecticut.	Delaware.	Florida.	Georgia.	Illinois.	Indiana.	Kentucky.	Louisiana.	Maine.	Maryland.	Massachu- setts.
Albany.....	25,783	1	9	553	13	...	3	9	4	6	5	43	49	736
Baltimore.....	113,683	26	1,170	326	756	23	61	17	43	85	96	396	...	1192
Boston.....	63,687	17	47	575	29	9	52	17	8	12	32	769	191	...
Charleston.....	16,066	19	9	58	1	22	182	...	4	10	11	19	119	227
Chicago.....	5,831	21	7	506	29	4	8	...	89	97	24	203	69	430
Cincinnati.....	89,322	52	127	527	215	1	105	147	1185	2096	378	220	1643	1079
Detroit.....	6,323	6	15	224	9	2	13	25	10	93	6	70	34	296
Hartford.....	5,293	4	...	...	7	5	14	9	4	1	4	46	40	883
Louisville.....	16,235	71	53	116	59	3	51	99	1255	...	195	45	742	219
Manchester.....	9,555	...	...	11	1	1	2	18	...	...	...	197	1	1012
Memphis.....	2,134	187	18	66	4	10	96	67	94	860	56	21	109	56
Milwaukee.....	2,641	1	1	263	14	...	1	91	82	19	5	156	30	350
Mobile.....	5,507	...	18	139	5	183	835	1	14	91	228	100	154	289
Nashville.....	4,833	78	2	81	6	2	26	12	16	852	30	4	91	84
Newark.....	21,447	4	12	533	31	1	16	12	2	7	16	46	111	277
New Haven.....	13,775	21	9	...	13	15	92	6	6	15	34	79	57	551
New Orleans.....	34,101	620	92	228	44	189	249	147	115	1038	...	620	733	1178
New York.....	234,843	99	261	7,784	393	54	277	72	41	122	303	1432	1852	5587
Philadelphia.....	242,681	55	394	829	8678	15	123	52	62	197	163	333	5760	1858
Portland.....	15,110	5	15	43	8	1	6	7	1	...	...	...	35	1298
Portsmouth.....	7,038	...	5	30	3	...	2	...	...	...	2	866	7	415
Providence.....	24,393	6	35	989	22	9	29	5	3	9	6	326	218	4008
Richmond.....	14,138	8	40	72	14	5	8	...	...	24	4	22	268	161
St. Augustine.....	1,109	1	...	39	...	...	25	1	...	...	3	1	6	9
Savannah.....	4,774	14	8	84	9	121	...	...	2	5	6	25	49	100
St. Louis.....	20,831	52	109	335	79	10	73	1210	438	1846	360	112	841	608
Washington.....	19,237	18	...	122	66	23	60	23	24	72	23	79	7017	284
Wilmington, Del.....	8,671	2	10	21	...	...	5	2	11	3	2	765	50	161
Wilmington, N. C.....	3,527	9	3	55	3	17	13	2	...	5	...	16	26	42

Cities.	Born in the United States.													
	Michigan.	Mississippi.	Missouri.	New Hamp- shire.	New Jersey.	New York.	N. Carolina.	Ohio.	Pennsylv- ania.	R. Island.	S. Carolina.	Tennessee.	Vermont.	Virginia.
Albany.....	7	...	1	111	218	...	10	26	154	92	21	1	323	31
Baltimore.....	11	121	51	215	723	2,067	126	276	4986	181	122	26	211	3605
Boston.....	15	5	6	6,028	118	1,594	47	69	393	584	94	6	1744	251
Charleston.....	...	2	...	6	58	545	109	2	185	38	...	9	13	115
Chicago.....	249	28	71	170	239	3,870	24	390	545	46	5	18	456	119
Cincinnati.....	87	189	126	225	1,417	3,142	169	...	5119	143	112	245	250	2173
Detroit.....	...	4	19	80	83	2,620	15	305	276	21	12	24	981	161
Hartford.....	6	1	2	110	67	638	6	25	66	6	7	8	114	12
Louisville.....	8	69	148	39	206	777	109	1090	1365	22	72	306	42	1532
Manchester.....	...	...	1	...	82	1	...	1	15	...	...	...	1343	8
Memphis.....	4	164	79	16	20	160	351	150	194	5	181	...	7	419
Milwaukee.....	122	5	26	83	80	2,281	3	334	314	35	16	4	225	42
Mobile.....	...	230	16	89	73	701	216	86	224	24	459	75	32	330
Nashville.....	1	36	3	...	30	253	243	106	178	4	61	...	8	608
Newark.....	9	2	1	45	...	3,289	20	41	504	33	25	1	45	43
New Haven.....	5	12	8	35	270	1,167	20	57	212	47	201	4	63	39
New Orleans.....	52	842	431	155	274	4,086	214	751	1515	174	509	454	133	1232
New York.....	86	83	58	326	13,265	...	284	499	5233	961	535	26	953	1702
Philadelphia.....	18	24	60	288	15,570	4,858	198	505	...	288	470	85	157	2602
Portland.....	1	...	...	474	9	142	3	1	49	32	6	...	78	23
Portsmouth.....	...	...	...	...	1	51	1	6	15	9	3	1	27	7
Providence.....	5	4	...	321	86	760	58	30	170	...	20	1	134	99
Richmond.....	1	1	2	37	75	254	102	12	206	9	43	11	16	...
St. Augustine.....	...	...	...	3	3	5	7	...	8	9	19	1	1	6
Savannah.....	...	8	1	24	75	305	69	6	87	26	720	6	9	60
St. Louis.....	94	234	...	137	270	2,470	126	1638	2634	45	73	850	176	1630
Washington.....	26	39	25	77	139	723	86	114	1000	19	71	54	40	4046
Wilmington, Del.....	...	1	2	10	525	100	10	15	1908	2	1	1	2	56
Wilmington, N. C.....	...	1	1	2	8	97	...	1	34	15	57	...	1	89

Nativities of the Inhabitants of the Leading Cities—Continued.

Cities.	Foreign born.										Aggregate.	
	England and Wales.	Ireland.	Scotland.	Germany.	Prussia.	Austria.	France.	Spain.	Italy.	Native.*	Foreign.*	
Albany.....	2,082	78,079	540	2,875	1	97	9	1	31,162	16,591		
Baltimore.....	2,133	12,057	525	19,274	144	16	246	16	67	130,491	35,499	
Boston.....	3,218	35,287	897	1,777	80	225	67	134	68,948	46,677		
Charleston.....	546	2,869	323	1,789	27	1	187	28	56	17,809	4,648	
Chicago.....	1,883	6,096	610	5,085	88	21	284	9	4	18,688	15,682	
Cincinnati.....	4,135	14,899	718	33,374	148	19	797	4	152	60,558	54,541	
Detroit.....	1,245	3,289	474	2,888	18	7	282	4	4	11,055	9,927	
Hartford.....	2,385	2,188	58	271	12	18	37	4	4	10,551	2,915	
Louisville.....	720	3,105	169	7,357	145	24	422	4	112	25,079	12,461	
Manchester.....	182	1,193	81	.....	.....	.....	.....	.....	.....	12,244	1,688
Memphis.....	133	704	29	341	8	1	69	1	44	5,028	1,401	
Milwaukee.....	1,212	2,816	245	6,028	1,243	16	129	.....	.....	7,181	12,782
Mobile.....	547	2,009	205	618	32	17	303	144	65	9,565	4,086	
Nashville.....	137	421	70	193	15	.....	86	1	8	7,185	943
Newark.....	2,124	5,564	265	3,818	4	6	240	8	.....	26,561	12,322
New Haven.....	371	2,772	107	278	11	.....	54	.....	8	16,641	3,697
New Orleans.....	2,670	20,200	854	11,220	205	129	7,522	1,150	658	50,470	48,601	
New York.....	23,671	138,730	7,660	55,476	635	109	4,990	808	708	277,752	235,733	
Philadelphia.....	17,500	72,312	3,291	22,750	270	84	1,961	291	236	286,346	131,099	
Portland.....	156	2,031	50	22	14	2	.....	.....	6	17,265	3,512
Portsmouth.....	343	523	62	25	1	.....	6	.....	.....	8,540	1,179
Providence.....	1,119	7,635	322	87	2	1	40	10	19	31,753	9,679	
Richmond.....	268	685	183	740	18	2	63	5	34	15,541	2,162	
St. Augustine.....	7	11	4	5	.....	.....	6	8	1	1,244	56
Savannah.....	227	1,555	60	333	8	7	87	18	15	6,590	2,434	
St. Louis.....	2,957	9,719	550	22,840	231	13	682	86	101	84,529	38,397	
Washington.....	685	2,023	136	1,246	10	1	69	22	49	33,530	4,282	
Wilmington, Del.....	240	1,215	24	157	26	.....	16	1	.....	12,198	1,768
Wilmington, N. C.....	88	63	14	72	.....	1	9	.....	.....	4,023	208

Note.—Exclusive of 5 Arkansians in Baltimore, 25 in Cincinnati, 26 in Louisville, 30 in Memphis, 37 in New Orleans, and 39 in St. Louis, &c; 4 Californians in New York; 19 Iowans in Chicago, 24 in Cincinnati, 10 in Louisville, 5 in Memphis, 6 in Milwaukee, 21 in New Orleans, 4 in New York, 7 in Philadelphia, and 77 in St. Louis; 19 Texans in Baltimore, 9 in Cincinnati, 8 in Hartford, 9 in Louisville, 10 in Mobile, 164 in New Orleans, 23 in New York, 8 in Philadelphia, 4 in Richmond, 31 in St. Louis, and 6 in Washington; 76 natives of Wisconsin in Chicago, 8 in Cincinnati, 21 in Detroit, 4 in New Haven, 23 in New York, 7 in Philadelphia, and 23 in St. Louis; 4 natives of the Territories in Louisville, 31 in New York, and 3 in Providence. Savannah cannot be defined on the returns.

* Exclusive of those unknown. The total foreign includes other countries not named in the table.

“COTTON” IS KING.*

FREE-NEGRODOM.

This is a work, though under a coquetish title, worthy of the most serious attention of every patriotic American, whether north or south of Mason and Dixon's line. It is at once cogent, well-informed and temperate. While it must delight every friend to the continued glory and happiness of this aspiring republic, it need not offend the most determined abolitionist. What then are its merits? the reader naturally exclaims. They consist in the follow-

* Cotton is King: or the culture of cotton and its relations to agriculture, manufactures and commerce, to the free colored people and those who hold that slavery is in itself sinful. *By an American.* Cincinnati, 1855.

ing propositions, which are fortified by authentic evidence and sound temperate argument:

1. The utter failure of the free colored race, in the non-slaveholding States, to confirm the hopes of their white friends, by improved morality and industry.

2. The insuperable aversion of the free colored race to labor in the articles of slave labor most demanded by the markets of the world, as cotton, rice, sugar and tobacco.

3. The stubborn resistance to emigrate to a purely African and civilized state, as Liberia, encouraged, too, by mistaken friends.

4. The vast ramifications of the products of slave labor with the agriculture, the mechanic arts, the manufactures and the commerce of the United States as well as those of the civilized world.

5. The participation and even its encouragement by the friends of the colored race, *our armis des noirs*, and even the free negroes themselves, in African slavery, by freely and eagerly consuming the products of slave labor, on which slavery subsists, and by which it lives.

6. That slavery is a great civil and social evil identical in principle with *despotism*; but which is to be tempered by mercy and religion, till, like the other evils of human life, it can be abolished without endangering the civilization of society.

1. The utter failure of the free colored race, in the non-slaveholding States, to confirm the hopes of their white friends, by improved virtue and industry.

It ought not to be forgotten in viewing the progress of a race considered and treated as an inferior and degraded one, that they cannot be expected to feel a full social impulse to exertion and forbearance; the same degree of improvement ought not to be expected of them in the absence of the most influential incentives to human effort. But while admitting this extenuation, will it cover or defend the social delinquency of the free colored race in the non-slaveholding States?

The first fact which presents itself to the notice of every good citizen and every lover of orderly and prosperous society, is, that after forty-seven years after Pennsylvania abolished slavery within her limits, which was in 1780, "*one third* of the convicts in her penitentiary were colored men; while few of the other free States were more fortunate; and some of them even worse—one half of New Jersey's convicts being colored men."* While this was the ratio of

* Boston Prison Discipline reports, 1826-1827.

colored to white criminals, that of the white population of Pennsylvania to its colored was, in 1830, as 1,112,784 to 38,435; that is more than 25 to 1. The same comparison of the two kinds of population in New Jersey gives 299,590 whites to 18,283 colored people, or more than 15 to 1. At these ratios, the colored criminals in Pennsylvania should have been $\frac{1}{25}$ of the whole, while it actually amounted to $\frac{1}{4}$; and in New Jersey the colored criminals should have been $\frac{1}{15}$ of the whole criminal population, while it actually was $\frac{1}{4}$. The actual degradation and inferiority of the African negro race, not the Abyssinian, not the Egyptian, not the Moorish race of northern Africa, for these are well established different species of men, but the genuine negro race, is a melancholy fact, authenticated by its earliest memorials. The continued barbarism and the abject slavery of this race at home, its notorious sale to all the slave buyers of the world, possibly to the ancient Egyptians, but certainly from the time of Las Casas to the present, are pregnant proofs of degraded nature. This is not said to discourage attempts at the improvement of this unfortunate race; but rather to stimulate its friends to wiser and more energetic efforts. But what observer of the world around him can avoid asking the question, how comes the negro race so long subject to slavery and sale as inanimate merchandize, while other races of mankind have redeemed themselves from this condition, in some degree, more or less? This truth is exemplified in the condition of those who were the serfs of ancient Europe, and the northern regions of that part of the world in modern times? Why is the negro more subservient to slavery than any other race of man? His resistance to improvement among a superior and dominant race might be admitted without precluding him from the hope of amelioration under more propitious circumstances.

The actual degradation of the free negro, below the standard of civilization around him, is a fact that cannot safely be denied in the United States, in Canada, or the West Indies. Even in the free dominion of the north, (possibly an unfavorable climate for the development of the negro,) he withstands the example all around him, and vegetates in poverty and misery.

Were the negro not thus averse to order and industry among the free whites, why have the free States of the northwest, Ohio, Illinois and Indiana, obstructed their settlement among them so pertinaciously? This, too, in a market so understocked with laborers? They cannot feel the apprehension, which the slaveholding States may well enter-

tain, of their corrupting and seducing their slaves; and still they all, and I believe some of the eastern States, act on the policy of excluding the free negroes from among them. Nor have any of the most rabid advocates of negro freedom relaxed their laws for the admission of negroes in the halls of legislation; and but most partially, and hardly as an act of society, have they admitted the black race into family alliance by marriage with the white.

The testimony to this obstinate degradation is confirmed by the report of missionaries and travellers of most undoubted veracity, and likewise of the friends to the negro in the non-slaveholding States. I will begin with the last; it is a letter from the Hon. Gerritt Smith to Governor Hunt, of New York. It is dated in 1852, and after speaking of his ineffectual efforts to prevail upon the free colored people to betake themselves to mechanical and agricultural pursuits, says: "Suppose, moreover, that during all these fifteen years they had been quitting the cities where the *mass of them rot both physically and morally*, and had gone into the country to become farmers and mechanics." Again, in the same letter, he says, "I do not say that the colored people are more debased than white people would be, if persecuted, oppressed and outraged as are the colored people. But I do say, that they are debased, deeply debased; and that to recover themselves, they must become heroes, self-denying heroes, capable of achieving a great moral victory—a two-fold victory over themselves and a victory over their enemies."*

Such is the condition of the free colored race in the non-slaveholding States.

Nor is their condition better in Canada; of four stations under the care of the abolitionists, at the opening of 1853, but one school remained. The missionaries formally asked the parent society to be released, because, say they, "of the opposition to white missionaries manifested by the colored people of Canada," "and the interested misrepresentation of ignorant colored men pretending to be ministers of the gospel." For these reasons, they say that the funds of the association could be better employed *elsewhere*."†

In the West Indies the account is still worse. The American and Foreign Anti-Slavery Society, for 1853, say that the friends of emancipation have been disappointed in some respects at the results in the West Indies, because they expected too much. A nation of slaves cannot at once be converted into a nation of intelligent, industrious, and moral freemen."

* *Idem*, 146.

† *Idem*, 134.

“Licentiousness prevails to a most alarming extent among the people. The almost universal prevalence of intemperance is another source of the moral darkness and degradation of the people. The great mass among all classes of the inhabitants, from the governor in his palace to the peasant in his hut, from the bishop in his gown to the beggar in his rags, are all slaves to their cups.”*

Mr. Bigelow, of the *New York Evening News*, after spending a winter in Jamaica, for the very purpose of observing the condition of things, mentions the enormous quantity of lands thrown out of cultivation since 1848, says: “This decline has been going on from year to year, daily becoming more alarming, until at length the island has reached what would appear to be the last profound of distress and misery;” “thousands of people do not know, when they rise in the morning, whence or in what manner they are to procure bread for the day.”†

Gov. Wood, of Ohio, on his way to Valparaiso, in 1853, stopped at Kingston, in Jamaica, and thus describes what he witnessed: “We saw many plantations, the buildings dilapidated, fields of sugar cane half-worked and apparently poor, and nothing but that which will grow without the labor of man appeared luxuriant and flourishing. The island itself is of great fertility, one of the best of the Antilles; but all the large estates upon it are fast going to ruin. In the harbor were not a dozen ships of all nations, no business was doing, and everything you heard spoken was in the language of complaint. Since the blacks have been liberated they have become indolent, insolent, degraded, and dishonest. They are a rude beastly set of vagabonds, lying naked about the streets, as filthy as the Hottentots, and I believe worse.”‡ Again, Bishop Kip, on his passage to California, in 1853, also stopped at the same Jamaica port, and declares that “the streets are crowded with the most wretched looking negroes to be seen on the surface of the earth. Lazy, shiftless, and diseased, they will not work since the manumission act has freed them. Even *coaling* the steamer is done by *women*. About a hundred march on board in a line with tubs on their heads, (tubs and coal together weighing about 90 pounds,) and with a wild song empty them into the hold. The men work a day, and live on it a week. The depth to which the negro population has sunk is, we are told, indescribable.”§ This testimony might be confirmed by other authorities, indeed by every traveller to the non-slaveholding islands in the West Indies, or proprietor in those oppressed and harassed colonies of

* *Idem*, 139.† *Idem*, 141.‡ *Idem*, 142.§ *Idem*, 142, 143.

European masters and foreign legislators. It is most amply corroborated by Mr. *Barton Premium*, in his "Eight years in British Guiana, from 1840 to 1848, inclusive."* Laborers deteriorating season after season, year after year, wages rising, and fields turning out of cultivation for want of laborers and sufficient work. Expenses of cultivation accumulating on the planter.

A planter, who made 700 hogsheads, assured the author that it took his whole crop of sugar to pay the expense of his plantation, and he had only his rum clear."† "There might be," he says, "nearly a score of such plantations out of 200 left in the colony. Of the rest, there is not one that affords a revenue." "Estates sold in 1849 fetched fifty per cent. below those of 1840." "One estate, which was sold in 1839 for £20,000, was now (1856) sold for £8,000." These are but specimens of wholesale ruin, diminution of product and depreciation of property throughout the province of Guiana, under the rule of a British queen and parliament.

And shall our countrymen labor to bring on a similar state of ruin and desolation on their own fellow-countrymen? men of their own race, to favor a foreign one, of most intractable and stubborn and low dispositions? Shall the free white men of the United States struggle against the peace and happiness of their own fellow white men, to bestow freedom on a race which will not enjoy that freedom but will abuse it, as all experience with them in our own bosom proves? Shall the black man be freed by the ruin of his white brethren, to brutalize the negro still more deeply?

[To be continued.]

PAUPERISM AND CRIME—WHITE AND COLORED—NATIVE AND FOREIGN.

ON THE INFLUENCE OF SOCIAL DEGRADATION IN PRODUCING PAUPERISM AND CRIME, AS EXEMPLIFIED IN THE FREE COLORED CITIZENS AND FOREIGNERS IN THE UNITED STATES. BY THE REV. ROBERT EVEREST, OF ENGLAND.

During a residence in India I had an opportunity of observing the social degradation of certain classes among the Hindoos, accompanied by great want of moral character among those so degraded. In the belief that the latter of these phenomena was the effect of the former, or that, wherever a degraded class existed, they would be found wanting in moral character, it was sought to bring this idea to the test of numerical calculation.

For this purpose it was necessary to assume that what I

* London, 1850. De Bow's Review, Ap. No., 1855, and sequel.

† De Bow, Ap. No., 491.

have termed the want of moral character, or, in other words, the tendency to crime and pauperism, might be measured by the proportionate numbers of each class that were to be found in the various prisons, jails, and almshouses throughout a country.

The United States, then, appeared to afford a good example, in its free colored citizens, a distinct class, socially degraded, and the object was to ascertain in what numbers, relative to the total population of each, they and the white race were held in confinement.

To this end I first collected from the "American Almanack," for 1853, (a small annual of statistics published in the country,) an account of the numbers of each race, white and colored, to be found in the State prisons of several of the States at a certain period, and comparing these with the total population of each, as given by the census of 1850, I was enabled to make out a table, showing the number of State prisoners of each race to every 100,000 inhabitants.

But when I came to the numbers for the State of Massachusetts, where the total of foreign white prisoners was given separately from the native, I found, on comparison, that the proportion of the former was much greater in the prisons than of the latter.

Thus, by referring to the table (A) it will be seen that the native white Americans were in the State prison of Massachusetts only in the proportion of 32 to 100,000 inhabitants, of foreigners 97 to 100,000, and of the colored race no less than 552 to 100,000. It was evident, then, that to obtain anything like a correct estimate of the difference between the native white and free colored races, the number of foreigners among the former must first be deducted. This could not be done from the imperfect information afforded by the publication above referred to, but I took the opportunity of a visit to the United States to resume the inquiry.

I first obtained at Boston the official report of the house of reformation for juvenile delinquents, and of the almshouses there, and afterwards, at New York, visited or obtained the reports of the three State prisons in that State, besides the city and county jail, or penitentiary, the workhouse, (where those under sentence for short periods are confined,) the almshouse, and the house of refuge for juvenile delinquents.

I must here take the liberty of stating, for those unacquainted with the subject, that this house of refuge is, in fact, a house of reformation, where juvenile criminals and vagrants are sent instead of to jail. For further particulars

respecting it I beg to refer to the note that accompanies table E.

From New York I went to Philadelphia, and there pursued the enquiry, visiting all the public establishments that could throw light on it. After this I repaired to Washington, in the hope that, on application at the census bureau there, the question would be solved at once, but I was told that no such information as I wished had been printed.

I therefore made a point, in a journey of several thousand miles through the States, of visiting the State prisons, county jails, and almshouses on my way, and obtaining such information as I could respecting their inmates.

From this I was enabled to draw out at length a table (A) for 16 of the principal States, shewing first, from the census, (1850,) the total population of each class, native white, free colored, and foreign, in the State, next the number of each class in the State prison, and the proportion of prisoners to 100,000 inhabitants. As this information has either not been printed, or, if printed, only in a number of separate official reports for distribution among members of the local legislatures, and which are to be obtained only at the respective State prisons, I have taken the liberty of offering it to the society.

It will be observed, by reference to the table A, that the 16 States there enumerated possess an aggregate population of 12,143,978 native whites, 345,568 free colored, and 1,790,807 foreigners. As the totals of each class, for the whole of the United States, amount only to 17,312,533 (including 32,658 individuals whose place of birth was unknown,) 434,495 and 2,240,535 respectively, it is not probable that a more extended investigation would materially alter the results already obtained.

Again, referring to the table (A) it will be seen that, from the totals of populations and State prisoners there given, the ratio of these latter to every 100,000 inhabitants has been found to be 22 for the white natives, 224 for the free colored, and 78 for the foreigners, which number are to each other nearly in the ratio of 1 : 10, and 1 : 3 $\frac{1}{2}$, or more correctly, 1 : 10.18 and 1 : 3.55, and this is the ultimate fact which it was desired to obtain.

The consideration of it enabled me to put together a quantity of scattered information I had gathered, during my journey, from the different jails, almshouses, and houses of refuge, for it evidently mattered not whether the number of prisoners and paupers was great or small, in every 100,000 inhabitants, so that the ratio of one class to the other was

preserved. I therefore made out a table (B) in which is stated the number of inmates of each class in certain of the city and county jails, houses of refuge, and almshouses which I visited, but the ratio of prisoners to every 100,000 inhabitants is omitted, and instead of that, the ratio of each class of prisoners to the native white is given in a separate table, marked C; the first term of the ratio, viz., the native white, not being expressed, as being in all cases equal to unity. These establishments being merely for subordinate districts or counties, for the most part, I have used in making the calculations the total populations of those districts or counties as given by the census, (1850,) rather than the total populations of the States which were taken for table A. These different populations are given in a list at the end of the table B, and in the right hand column of that table the number indicates which of those in the list has been taken for comparison.

From the general average at the bottom of the table C, it will be seen that the ratio of native whites in the jails, police prisons, &c., is to the colored :: 1 : 5.48, in the houses of refuge :: 1 : 25.20, and in the almshouses :: 1 : 4.84, and the ratio of the same to the foreigners is in the jails, prisons, &c., :: 1 : 4.96, in the houses of refuge :: 1 : 8.80, and in the almshouses :: 1 : 6.63.

It will be observed that these ratios differ, in some degree, from those derived from the State prisons, which I have placed in the right hand column by way of comparison, but the circumstances in the two cases differ greatly. In the State prisons only crimes of a grave nature are punished, such as felony; in the county jails and the police prisons, especially the latter, "assault and battery," "drunkenness," the disorders of a sailor ashore, and domestic squabbles, are all condemned to a short lock-up.

The circumstance that, in the general average, the ratio of foreigners to the native whites is more in the almshouses than of the colored to the same (the latter being only 4.84, the former 6.63), arises, I believe, from the circumstance that there is rather an indisposition to admit them to the benefits of the almshouses, than any lack of desire on their part to get there. At Louisville, Kentucky, I found the colored were not admitted at all to the almshouses; at Cincinnati, Ohio, from the annual report of directors of infirmary, (March 1st, 1852), we learn that out of 3,269 cases in which relief was given during the previous year, in only 10 was it given to colored people, and only for interment.

Referring again to the table A, it will be observed that the number of State prisoners to 100,000 inhabitants differs

greatly in different States, but it must be remembered that these are semi-independent States, each with its own code of laws; thus, in Connecticut, a number were in the State prison for adultery, but nowhere else. In the Pennsylvania State prisons the separate system prevails, which is much more severe than any other, and this, consequently, may account for the small numbers to be found there. In the southern, or slave States, the number of State prisoners appears to be smaller than in the north, but this, probably, arises from the circumstance that these are more inclined to the summary and less troublesome modes of flogging and hanging. "North Carolina," says the report of the State prison, (Richmond, Virginia,) "has never departed from the old system of the gallows." It has no State prison, neither has South Carolina; Georgia has one, but it is much found fault with by influential people; Mississippi has one, but no colored are admitted there.

Upon the whole, then, the information derived from tables B and C does not invalidate the conclusions obtained from table A, namely, that for equal numbers of different classes of the population, the ratio of colored prisoners, and of foreign to the whole, is greater than of the white natives, (thus evincing a greater tendency to poverty and crime in those two races;) but on the contrary, confirms them.

Reverting again to the details of table A, we find that in one of the States, the details of which are there given, the populations, &c., have been taken from the "American Almanack," (1853,) in which the whites are not subdivided into natives and foreigners, so that, to complete the table, it was necessary to assign to it a proportion of foreign criminals equal to what prevails in one or two of the contiguous States: the name of the State is Vermont. The number which is given upon analogy is marked with an asterisk, but, as the State to which it belongs is not among the most populous and important, no probable alteration in it would materially influence the general result.

The question then, being regarded for the moment as proved, it naturally occurs to us next to inquire what is the cause of such a result, which appear to be general.

1. The greater or less density of population in different States, by giving greater or less facilities for the concealment of crime, may affect the proportions existing between the criminals of different States, but cannot influence those between criminals of different races in the same State: that reason, therefore, may be dismissed from consideration.

2. The circumstance that the colored do for the same crimes receive in some States a longer term of imprisonment

than the whites, and thus would appear in the State prisons at any given time in larger proportions than the latter, might account for a small inequality of ratio between the two classes, but not for the very large one we have ascertained, viz., 1 : 10.18. Take, for instance, the case of the eastern State prison of Pennsylvania, at Philadelphia. In the years 1850, 1851 and 1849, 316 white prisoners were discharged, after having altogether completed a term of imprisonment amounting to 732 years, or 2 years, 3 months, and 24 days for each individual; while during the same period 91 colored were discharged, having completed a total of 239 years—2 years, 7 months, and 15 days for each. Now these two periods are to each other very nearly in the ratio of the number of months of which each is composed, viz., :: 27 : 31, whereas the number of State prisoners to 100,000 inhabitants of each class was, respectively, 10 and 198, an inequality by no means to be accounted for from a small difference in the duration of imprisonment.

3. It may be asserted that the greater tendency to crime and poverty among the colored race may be caused by their want of education. Let us see how far this reason holds good.

If we assume the not being able to read and write as the test of want of education, we shall find that, in the 16 States over which our investigation has extended, the total numbers in such a predicament, of each class, were, by the census of 1850—

Native Whites.....	420,497
Colored.....	69,630
Foreign.....	166,161

Comparing these amounts with the total population of each class, as given in table A, the number that cannot read and write of each, in every 100,000 of population, is—

Native Whites.....	3,463
Colored.....	20,439
Foreign.....	9,278

These numbers are to each other, very nearly, :: 1 : 5.93 and : 2.68, whereas the ratio in which equal numbers of the different classes were found in the State prisons was, by table A, 1 : 10.18 and : 3.55.

It is clear then, that there is a portion of this inequality of ratios which want of education cannot account for, even though we suppose it everywhere to have produced a full, or proportionate, effect.

Besides, this reasoning will only hold good where the whole of the prisoners are uneducated, *i. e.*, cannot read and write.

In such a case, if we had 1,000 or 100 individuals, and no other causes were in operation to influence the result, we might expect to find the different classes divided according to the ratios we have above laid down, viz., 1 : 5.93 : 2.68. If we then took an equal number of educated prisoners, we might expect among them to find these ratios changed, for the same cause that increased the chance of any one class being found in greater proportion than the others among the uneducated would diminish the probability of its being found even in equal numbers among the educated. Thus, taking the case above, the native whites, we suppose, are found uneducated to the number of 3,463 in 100,000 inhabitants, and the colored to the number of 20,439 in the same. Suppose, also, that the uneducated are confined in the proportion of 1 : 10, and the educated only in that of 1 : 20, then the number of uneducated prisoners would be $346 + 2,043 = 2,389$, and the number of educated

$$\frac{100,000 - 3,463}{20} + \frac{100,000 - 20,439}{20} = 4,826 + 3,978.$$

Now we have not often any information upon the education of the prisoners in the official reports, but in 5 of the 16 States we have, and they belong to the most populous—Pennsylvania, Maryland, Indiana, Kentucky, and New York. We are there informed that out of a total of 2,539 confined in these 5 prisons, 1,332 could read and write, and 1,207 only could not. We cannot, therefore, ascribe the greater tendency to crime among the colored to ignorance alone, though that may in some degree promote it.

Three other modes of accounting for these phenomena have been suggested to me. In the case of the negro, it is said that his physical organization is deficient, or, as the phrenologists would call it, the conformation of his skull. In the case of the emigrants, it is said they are the worst part of the population of their respective countries. Neither of these causes will account for the differences between the various classes of emigrants.

Thirdly, it has been said that the differences in crime between the emigrants arise from the Protestant and Catholic religion.

But this will not account for the great difference between Sweden and Norway, where both countries are Protestant.

Unable, then, to assign any other cause to the phenomena, we must revert to the one to which we alluded at the commencement of this paper, viz., that the social degradation of a class, generally speaking, and of the colored race in this

particular instance, is the cause of its greater tendency to crime and poverty.

If we consider how it is that this happens, it naturally occurs to us, that they who have had the misfortune to be placed by birth in a degraded position, are not likely to entertain any friendly feelings towards those who from their infancy have been accustomed to treat them with contempt. Moreover, their lot in life is fixed; there is little or no hope of bettering their condition and of ensuring respect. They have, therefore, no inducement to practise self-denial for the present from a regard to the future. The sensual enjoyments of life are those alone which circumstances allow them to look to.

A train of conditions exactly opposite to these concur to form the character of the white citizen of the free States. He is born, even if he be poor, among equals and friends. Nothing tends to awaken feelings of malice or antipathy within him. The honors of the State are fully and fairly thrown open to him, and he becomes conscious, from an early age, that upon himself alone depends the position in life which he is to attain. Thus he learns to practise self-denial, in the hope of bettering himself for the future. He is free-spoken and unaccustomed to deceit, resembling in these respects the nations of Europe, such as the Swiss and Norwegians, whose institutions are partly similar to his own. Like them, he becomes self-relying, frugal, and industrious, and, like them, does not shrink in early life from exiling himself from home, to return, after years of toil, with wealth and credit.

Besides, where every man is a legislator, his own feelings are interested in observing, and encouraging others to observe, the laws which he has himself assisted in making. He is no longer a mere labor-machine, drudging for the benefit of others, but a partner in the concern.

I have named these two nations, the Swiss and Norwegians, because among them I first had an opportunity of observing the effect of certain circumstances, analogous to those which prevail over the free States, in developing the good feelings of mankind and elevating their views. The character of the Swiss is known to every one. From table A it will be seen how far that of the white native of the States compares with the general European one. The general ratio for State prisoners is :: 1 : 3.55.

But, from the information given in the official reports, I was enabled to make out a further table for 12 of the States, showing the number of European State prisoners in each State, their native countries, and the total population of each

description residing there. From this a further comparison was made of the tendency to crime in each nation separately, by ascertaining the number of each that were to be found in the State prisons to every 100,000 inhabitants.

The numbers are much too small, in many cases, to be relied on, yet I cannot help pointing out as extraordinary, if only a coincidence, that the three nations whose institutions are most analogous to those of the United States, viz., Switzerland, Norway, and Holland, should agree with them in the comparative absence of criminality and pauperism among their peoples.

I have now only to state how far I have been made aware, since these inquiries were commenced, that the object of them has been anticipated.

It became known to me very early, that the greater tendency of the colored race to commit crime had been remarked by Mr. Siljeström, the Swede, and by Chevalier (Michel) ("Lettres sur l'Amérique du Nord.") But, beyond this general fact, I knew nothing until my own investigation was nearly concluded, when, on visiting the State prison of Virginia, at Richmond, I was favored by Mr. Charles S. Morgan, the superintendent, with a copy of his official reports for two years, (1851 and 1853-'4.) In the first of these the subject is cursorily touched upon, (p. 12,) but in the latter, two tables are drawn out, (pp. 44, 45,) one shewing the numbers of each class received in the State prisons of 5 States, and the proportion which each bore to their respective populations. From this it would appear, that for equal populations the ratio of white criminals is to that of colored :: 1 : 7.91. From the second table, which is that of the numbers confined in the prisons of eight States, he derives the ratio of 1 : 10.71. The first of these coincides best with the deductions I have obtained from table A, considering that he has not separated the foreigners from the native whites.

In the abstract of the seventh census of the United States (Washington, 1853) it is stated, that "the whole number convicted of crime in the United States for the year ending June 1st, 1850, was about 27,000; of these 13,000 were natives, and 14,000 foreign born. The native prisoners include colored convicts, the numbers of whom it is impossible to state." Pauperism:—"The whole number of persons who have received the benefit of the public funds of the different States for the benefit of indigent persons amounts to 134,972; of this number there were 68,538 of foreign birth, and 66,434 Americans. Of those termed Americans many are free persons of color," (pp. 28, 29.) Now, compare

Natives.		Foreigners.	
Total Pop.	Crinals.	Total Pop.	Crinals.
17,737,505	: 13,000	and 2,210,828	: 14,000
:: 100,000	: 73.3	:: 100,000	: 633.2
Paupers.		Paupers.	
Total Pop.	Paupers.	Total Pop.	Paupers.
17,737,505	: 66,434	and 2,210,828	: 68,538
:: 100,000	: 374.5	:: 100,000	: 3100.1

These ratios are even of greater inequality than those I have obtained.

I cannot quit the subject without begging to draw attention to No. 4, table B, of those received or discharged from the city prisons of New York. In three years, ending 1852, a total of 68,456 prisoners were received or discharged from the city prisons, which were thus divided—

Native Whites.	Free Colored.	Foreigners.
12,522.....	3,757.....	52,177
Total Pop... 260,743.....	13,815.....	240,989

I advert to this, because there is undoubtedly some rowdyism, as it is called, and ruffianism, in New York, which is apt to impress travellers with an unfavorable idea of American institutions, but the blame, as may be seen here, does not lie with them.

The foreign parentage of the criminals and paupers has not been traced out, but, if we were to assume it to be what it has been proved in the case of the vagrant children admitted to the houses of refuge, namely, to that of the native white Americans, in the proportion of 8.8 : 1, (table C,) then, as we have before found, that, for equal numbers of population, the proportion of native white Americans was to that of the foreigners in the State prisons :: 1 : 3.55, we may conclude that the proportion of native white Americans by parentage, as well as by place of birth, is to that of foreigners by parentage as well as by place of birth :: $\frac{1}{8.8}$: 3.55 :: 1 : 8.8 + 3.55 :: 1 : 31.240. So little are the institutions of the country favorable to the growth of crime. In fact, the effects of them are very similar to what are obtained under free trade. The manufacturer, deprived of protection, more than makes up, by increased vigilance and skill, for the want of artificial aid, and, in like manner, the influential classes, in those countries where power rests with the people, labor with wonderful solicitude in forming them to industrious and moral habits. An idle and dissolute man, invested with political power, is felt to be a public nuisance, and the doctrine that "property has its duties as well as its rights" is fully acted upon.

That the degradation of their class does embitter the minds of the emigrants, and they wish to escape from it, may be further inferred from this, that the great majority prefer a

residence in the United States to one in the adjacent British colonies. Out of nearly two millions of people (1,909,543) who left the United Kingdom for North America, in 10 years, ending with 1852, (see Cheshire's "Results of the Census,") 78.4 per cent., or nearly four-fifths, went to the United States. Yet there are no physical or material advantages in the United States. Wages are full as high in the colonies, and land to be had on as easy terms. If we turn to the south we find that the emigrants shun the slave States, where labor is degraded, quite as much as they do the colonies. Six of the border free States had, in 1850, a population of 1,403,629 foreigners, while the six adjacent slave States, with an area somewhat larger, had not above 190,138, less than one-seventh of the other. The difference is well known in the free States, and the reason I have always heard assigned for it by Americans is the one I have given, viz., "that only a low, mean set, who have lost all self-respect, willingly go where labor is not honorable."

A singular confirmation of this remark may be found in the circumstance that, of the emigrants settled in the slave States, a much larger per-centage is to be found in the State prisons than of those who settle in the free States, (see table A.) In the free States, the number of foreign State prisoners to every 100,000 inhabitants of the same class varies from 42 to 105, while in the slave States it varies from 83 to 427. By going through the necessary steps we find the former class is found in the State prisons to the average number of 70 for every 100,000, and the latter to the number of 142 for 100,000. The native white American being 22. The difference would probably be greater between the two former, but that the sparseness of population in the slave States renders concealment of crime very difficult, and often impossible.

The free States referred to are 10: Vermont, Massachusetts, Rhode Island, Connecticut, Michigan, New York, New Jersey, Pennsylvania, Ohio, Indiana. The slave States are 6: Maryland, Kentucky, Mississippi, Louisiana, Alabama, Virginia.

That this preference of the emigrants for the comparatively narrow slip of country, called the free States, is not owing to its superior climate, may be seen by any one who will consult the map. The northern part of the State of New York, Michigan, and Wisconsin, are as much crowded by emigrants as any other parts; yet they are not further to the north than Upper Canada. Maryland, Virginia, and Missouri, are not more exposed to the heats of the south than Ohio, Indiana, and Illinois; yet the former are nearly deserted by

emigrants, the latter swarm with them. What can it be that determines thither such a host?

We may then subdivide the "foreigners," of Table A, into two classes: the one living in the free States, which may be called the one sensible to degradation, and the other living in the slave States, which may be called insensible to degradation. The latter of these, as we saw, had a rate of criminality (142) approaching that of the free colored, which is 224, and we may roughly compare the four classes thus: let the native white American criminals = 1, the emigrant of the free States will be 3, of the slave States 6, the free colored 10.

The late John Calhoun, Secretary of State, had also observed the greater tendency of the colored race to commit crime, as appears by a manuscript of his, which was shown me by Mr. De Bow, in the Census Office, at Washington.

NOTES ON THE PAPER.

1. There is, as I understood, a law in Louisiana, by which free colored people are prohibited from living within the State, unless some respectable white person will be responsible for their good conduct. This may serve to account for the small per-centage of the race in the State prison there. In the State prison returns of the other slave States the effect of severe laws may be seen in a similar way.

2. If, instead of taking the knowledge of reading and writing as a test of education, I had assumed the per-centage of children attending school of each class, the result would not have been very different. Thus, for the principal States where public instruction is given, the school-attending native white children were—

In Massachusetts.....	1-3.9	of the whole population.
The colored race.....	1-6.3	“
In New York the native white were.....	1-3.7	“
The colored.....	1-9	“
In Pennsylvania the native white were.....	1-4	“
The colored.....	1-8.7	“

Altogether, in these 3 principal States, the per-centage of native white children attending school is to that of the colored nearly as 2 : 1.

The report I heard of the colored children was that they are intelligent and quick enough when small, but, as they grow up, they cannot be brought to give their attention to their studies in the way the whites do. Probably this is because there are no prospects of reward held out to them in life. They are without hope, and consequently have only the sensual enjoyment of the moment to look to.

3. It will be observed that Wales is the only country of Europe whose natives give a per-centage of crime nearly as small as those of the United States, and those (Switzerland and Norway) which have, and Holland, which until lately had, similar institutions. But the comparison is not fair between a whole country and a part. It is like comparing a whole picture and a part. Wales has no metropolis of its own; the metropolis is London, where great part of its resources are concentrated and re-distributed. Now, if we turn (*Journal of Statistical Society*, vol. xiii. p. 63,) to a paper by Mr. Barton "On the influence of the subdivision of the soil in promoting the moral and physical well-being of the people of England and Wales," we find that the per-centage of crime in Wales is, to that of England and Wales, nearly in the ratio which we have obtained from the emigrants to the United States, viz. 1 : 3. It is also shown in that paper that the per-centage of crime varies in the agricultural counties of England and Wales with the number of laborers kept, on the average, by each occupier of land, being least in those where the number is least, and increasing with them. But the small number of laborers kept is also a proof of equalization of wealth, which condition American forms tend most to preserve.

If we wish to see the whole effect of institutions we must take the metropolis into consideration. The average per-centage of crime for the whole country being = 1, the metropolis (Middlesex) = 1.61, the highest of any division in the country, while Wales is only .31.*

The superiority of character of free peoples is an old remark. "Of all governments," says Milton, "a commonwealth aims most to make the people virtuous, noble, and high-spirited." This is so far incorrect, that a commonwealth, which makes degraded classes, lowers as much as any other form. It is the equality of condition which elevates the mass.†

If we turn to a table, showing the proportion of criminals in the State prisons, natives of different countries, we find those of British North America and the white natives of the United States.

Now, in this case, we have the two great branches of the same British race side by side. Both have the advantage of inhabiting new countries where the rate of wages is high and there is abundance of unoccupied land. Seventy-eight

* See for this Mr. Rawson's paper (*Journal Statistical Society*, vol. ii.)

† Another observation of similar import regarding the structure of language is, that the word "villainy" means the act of a villain, or person of degraded caste.

years ago they were the same people. They are still identical in every respect but one. Yet the first has a proportionate criminality of 150 to 100,000 inhabitants, the second 23!

In another table, the high criminality of the English, Irish, and Scotch emigrants may be partly owing to the circumstance, that the identity of language enables bad characters from the United Kingdom to roam over the rural districts, where the friendly, unsuspecting way in which the inhabitants live, invites their depredations. The other foreigners are more confined to the great cities.

The trifling difference in the criminality of the native white Americans, shown in the two tables, arises from the circumstance that in the latter more prison lists, embracing a longer period of time, have been taken into the comparison.

Additional note on the emigrants.

The preference of the emigrants for the United States has been denied, and it has been asserted that they only embark for the ports of the States on their way to Upper Canada. I cannot find any foundation whatever for this statement; on the contrary, there is a movement in the opposite direction. Large numbers take the route through Canada by the St. Lawrence, as the cheapest way to the western States of the Union, (see for this, 3d Report of Emigration Committee, 1838, p. 111.) Besides, "It is certain," says the Census Report of 1851, "that the emigration from the United Kingdom contributes largely to the increase of the population of the United States."

The published returns are somewhat defective, but we may obtain, approximately, the numbers that have left for the States, thus:

	Persons.
From the end of 1824 to the end of 1849, (25 years) there emigrated to the United States from the United Kingdom.....	1,260,247
Allow for the preceding four years, (1820 to 1824,) on the supposition that the number of emigrants to the States bore the same proportion to those of British North America that they did in the succeeding four years, 1824 to 1828, inclusive.....	33,833
Allow for the preceding twenty years, 1821 to 1800, at the same rate of decrease as takes place from 1841 to 1821.....	51,610
Add for those that embarked in the first four months of 1850 (one-third of the whole year).....	74,359
Total.....	1,420,049
Natives of United Kingdom residing in United States—June, 1850, by census.....	1,340,812
Difference.....	79,237

Or rather more than 5 per cent., a difference which is obviously too small for the losses by death in so long a period, and with the large mortality which is usually experienced by emigrants. We are therefore reduced to one of two suppositions, either a large number left the British ports without being registered, or they passed from the British provinces into the States.

If this calculation be rejected on account of the uncertain elements which it contains, then we have still to explain how it happens that so large a proportion of the natives of British North America are also found in the United States. By the American Census of 1850, we learn that they amounted to 147,711 persons. The total population of British North America was, by the censuses taken in different parts of it during the years 1848-'51 and 1852, 2,662,695 persons, while the

total population of the United Kingdom was, by the census of 1851, 27,675,145 persons. Now,

2,662,695 : 147,711 :: 100 : 5.547 and
27,675,145 : 1,340,812 :: 100 : 4.845.

So that the per centage of emigrants from the British provinces was rather larger than it was from the parent country itself.

This similarity of per centage may be accounted for upon the supposition that the masses in the two countries are influenced by a similar sentiment ; but, if we reject that, the physical circumstances of the two widely differ, and there is no other means of comparison.

The migration is very large. The number of foreigners in Great Britain was, by the last census, under 60,000, from all parts of the world.

APPENDIX.

TABLE A.

Showing the total amount of population of each description, native white, free colored, and foreign, in several of the United States, from the census of 1850 ; also the number of prisoners of each description confined in the respective State prisons, and the proportion of prisoners of each class to 100,000 inhabitants.

States.	Total population.			Number of prisoners confined in State prisons.			Number of prisoners of each class to 100,000 inhabitants.		
	Native white.	Free colored.	Foreign.	Native white.	Free colored.	Foreign.	Native white.	Free colored.	Foreign.
1. Vermont.....	279,889	718	83,688	68	2	26	23	279	77
2. Massachusetts.	819,144	9,064	169,598	264	50	158	32	552	97
3. Rhode Island.	119,975	3,670	23,882	24	6	15	20	168	68
4. Connecticut...	394,095	7,693	83,374	95	41	21	29	558	55
5. New York.....	2,388,880	49,069	665,324	842	226	548	35	468	88
6. New Jersey....	406,402	29,310	59,304	81	53	68	20	223	106
7. Pennsylvania.	1,963,376	58,628	309,106	204	106	188	10	198	45
8. Michigan.....	329,228	2,538	54,593	70	16	45	21	619	52
9. Ohio.....	1,792,698	25,279	218,099	325	58	91	19	210	42
10. Indiana.....	919,278	11,262	55,537	102	14	96	11	134	47
11. Maryland.....	866,650	74,723	51,011	105	114	68	29	158	123
12. Virginia.....	871,898	54,388	22,952	121	67	19	14	123	88
13. Kentucky.....	738,711	10,011	31,401	114	18	34	16	180	108
14. Mississippi*	290,337	.....	4,732	87	.....	5	13	.....	106
15. Louisiana.....	188,688	17,462	67,208	94	10	109	50	57	102
16. Alabama.....	418,015	2,265	7,498	128	1	82	29	44	427
Totals and General average.	12,148,978	845,568	1,790,907	2,664	775	1,838	22	224	78
							:: 1 :	10.18 :	8.56

* No colored received

NOTE.—Those of unknown nativity have not been included among the native white population, but they have among the colored. In these latter, however, they only amount to a small fraction

1. Vermont.—The numbers were taken from the American Almanac (1853) The total number of white prisoners there given is divided according to the ratio which obtains in Massachusetts and Rhode Island. 2. Massachusetts.—Numbers taken from American Almanac. 3. Rhode Island.—Official report for year ending December 31, 1852. 4. Connecticut.—Year ending March 31, 1851. 5. New York.—Official reports of the three State prisons—Auburn, Sing-Sing and Clinton—for the year 1850. 6. New Jersey.—The numbers were taken from the American Almanac (1854.) Total confined December 31, 1852. 7. Pennsylvania.—Average from official reports for 3 years—1851, 1850 and 1849. In the eastern prisons the nativities were only given of those admitted during each year, and the difference in color of those remaining at the end of the year. The total of whites then in confinement, at the end of each year, is divided according to the ratio obtained from the admissions. 8. Michigan.—The numbers were taken from the American Almanac (1854.) Total confined November 30, 1850. 9.

Ohio.—The difference of color is not stated in the official report of the Columbus State prison, which I obtained, but the nativities are given of those in confinement at the end of the year, (30th November, 1851,) the total number being 469. At the time of my visit to the prison, December 9, 1853, the total number of prisoners, as stated to me by the warden, then was 531, of which the colored were 60. Now 531 : 60 :: 469 : 53, total calculated number on November 30th, 1851. 10.—Indiana.—Total number in confinement November 30, 1850, from the official report for the year of the State prison, Jeffersonville. 11. Maryland.—Total number in confinement November 30, 1851, from official report of State prison, Baltimore, for the year. 12. Virginia.—Total number remaining 30th September, 1851, from official report of State prison, Richmond. 13. Kentucky.—Total number in prison 20th October, 1851, from official report of State prison, Frankfort, Kentucky. 14. Mississippi.—Total number in prison 30th November, 1852, from the official report of the State prison, Jackson. I was informed by the keeper that no colored people were sent here. 15. Louisiana.—From a manuscript which the warden allowed me to copy of the number in confinement at the time of my visit to the State prison, Baton Rouge, January 2, 1854. 16. Alabama.—From report of State prison, Wetumpka. Total number confined October 1, 1852.

TABLE B.

Showing the number of prisoners of each class, native white, free colored, and foreign, in the jails and houses of correction of the different States; also the same for the inmates of almshouses or paupers, and the inmates of houses of refuge. In the latter case the children of foreign parents are substituted for the "foreign."

	Jails and Houses of Correction.			Houses of Refuge.			Almshouses and paupers.			No. in list of total populations used in calculating ratios.
	Native white.	Free colored.	Foreign.	Native white.	Free colored.	Foreign.	Native white.	Free colored.	Foreign.	
1. Massachusetts.....	6,556	498	5,072							1.
2. Boston City Report.....				19		140	614	20	748	2.
3. Rhode Island.....	185	10	196							3.
4. New York received or discharged from city prisons.	4,174	1,252	17,392							
5. Blackwell's Island (city and county jail) Nov. 10, 1853.	255	92	868							
6. Admission to penitentiary hospital, 1850.	876	187	1,496							4.
7. Workhouse (petty offenders under sentence.)	104	17	298							
8. House of Refuge—average for 5 years, 1848-'52, inclusive.				54	25	209				New York S. (See A.)
9. Almshouse, Blackwell's Island, and Colored Home—admitted 1850.							614	508	1,741	
Do. Bellevue Hospital and Colored Asylum.							647	58	3,081	4.
10. Out-door relief to poor—in money—persons relieved, 1850.							2,908	474	8,594	
In fuel.....							3,537	1,984	20,547	
11. Philadelphia House of Refuge, average of 1852, '51, '50.				156	104	45				Pennsylvania S. (A.)

TABLE B—Continued.

	Jails and Houses of Correction.			Houses of Refuge.			Almshouses and paupers.			No. in list of total populations used in calculating ratios.
	Native white.	Free colored.	Foreign.	Native white.	Free colored.	Foreign.	Native white.	Free colored.	Foreign.	
13. County jail, Moyamensing. Confined, not sentenced.	60	44	49							
18. Blockley Almshouse admitted during year 1850, '51.	8,252	1,626	*2,655				1,069	869	3,416	5 and 6.
14. Pittsburg co. jail, Western Philadelphia.	52	15	*88							
15. Maryland, Baltimore, county jail, commitments.	801	447	*480							7.
16. Baltimore city and county almshouse.							713	894	1,179	7.
17. Ohio, Cincinnati—summary of indoor and outdoor relief.							851	No col.	2,406	} 8 and 9.
Columbus, Franklin Infirmary.							70	do.	140	
18. City and county jail	8	8	5							9.
19. Virginia (Richm'd) Almshouse.							77	28	85	10.
20. County jail and city do.	25	12	22							10.
21. New Orleans House of Refuge for female children.				3	No col.	78				11.
Total.....	15,798	4,153	23,566	281	129	467	11,099	3,675	41,850	

NOTE.—1. Numbers taken from American Almanac. 2. Report for year ending March 31, 1853. 3. Official Report, 1852. 4. Average of 1852, '51, '50. These city prisons are police prisons. 5. Verbally given at my visit. 6. Report. 7. Verbally given at my visit. 8. Reports. 9 and 10. Do. 11. Do. 12. Do. 13. Do. 14. Verbally given. 15, 16, 17. Reports. 18. Verbally given. 19. Do. 20. Do. 21. Do.

List of the total populations of States, counties, &c., used in calculating the ratios of the above.

	Native white	Free colored.	Foreign.
1. Massachusetts State.....	819,144	9,064	163,598
2. Boston city, or county of Suffolk...	93,147	2,038	46,632
3. Rhode Island State.....	119,975	3,670	23,832
4. New York county.....	260,733	13,815	240,989
5. Philadelphia county.....	271,110	19,761	117,891
6. Alleghany county.....	91,445	3,431	43,414
7. Baltimore county.....	135,350	29,075	39,503
8. Hamilton county.....	87,785	3,600	65,459
9. Franklin county.....	34,516	1,607	6,786
10. Henrico county (Richmond).....	21,290	3,637	2,536
11. Orleans county.....	42,620	9,961	51,227

NOTE.—Nos. 1, 3, 6 and 11 were omitted in computing the ratio for the almshouses, and Nos. 8 and 9 (Ohio) were not used for the colored, as none were admitted there. Nos. 2, 8 and 11 were omitted in computing the ratio for the jails. In taking the ratio for the houses of refuge but four returns were used, viz: No. 2, that for the State of New York, and that for the State of Pennsylvania (which are given in table A,) and No. 11. The second and third of these were alone used for the colored, as in the houses of those alone the colored were admitted.

TABLE C.

Showing the proportion which the prisoners and paupers, from equal numbers of the respective populations, bear to each other in each class, the native white American being in each case considered as unity.

	Jails, &c.		Houses of Refuge.		Almshouses and paupers.		State prisons.	
	Colored.	Foreign.	Colored.	Foreign.	Colored.	Foreign.	Colored.	Foreign.
1. Massachusetts	6.87	8.87					12.06	3.36
2. City Rept.				14.94	1.43	2.16		
3. Rhode Island	2.43	7.84					8.00	3.15
4. New York :								
4, 5, 6, 7	5.66	4.420					18.14	2.87
8			25.60	16.00				
9 and 10					7.89	4.77		
Pennsylvania :								
11. House of R.			24.25	1.88				
12 and 14	7.62	1.16					19.80	4.50
13					4.73	7.85		
15	2.60	2.05					5.24	4.24
16					9.58	5.67		
17							11.05	2.31
18	8.13	3.22						
19					1.74	3.82	8.78	5.92
20	2.81	7.42						
21				20.43				3.24
General average	5.48	4.96	25.90	8.80	4.84	6.63	10.18	3.55

NOTE.—With the above paper the editor of the Review received the following letter :

REFORM CLUB, PALL-MALL, LONDON, July 12, 1855.

MY DEAR SIR: I left yesterday with the United States consul (Mr. Campbell) a copy of my paper "on the influence of social degradations, &c.," containing the results of my observations on the prisons, jails, and almshouses of the United States, to be forwarded to your address at Washington; and I shall be much gratified to hear that it had reached you safely. By it you will perceive that I have arrived at the conclusion that republicans are the best behaved people upon earth; not only those of the United States, but those of Europe among the emigrants, are distinguished by the small numbers in which they are found in the prisons and almshouses. As the subject is one in which I have long taken an interest, perhaps you will allow me to say a few words more upon it. I hope, after your next census, to undertake a second journey to the United States and go through your establishments once more. In the meanwhile I would take the liberty of suggesting that, as much as possible, one form of return should be used in all of them. In those I collected during my recent journey I think it probable that some errors have crept in. Thus, *Swiss* and *Swedes* are apt to be confounded, and more especially *Dutch*, or *Hollanders*, and *Germans*. When the *German* is asked what country he is of, he answers "*Deutsch*," which would be written by an Englishman who heard it "*Dytsch*;" and any one unacquainted with the *German* language would actually conclude he was a *Dutchman*, whereas the *Dutch*, or *Dutchman*, calls himself "*Hollander*," and as such should be set down in the returns. It is also to be regretted that in many of the returns, such as those of the jails, houses of refuge, and almshouses, the inmates who are natives of *British North America* are not separated from the natives of the *United Kingdom*. When we talk here of the superior character of republicans, we are always reminded that *America* is a new country with plenty of land on which to spread her surplus population; but the difference between the *British colonist* and the *American citizen* clearly shows that there is some other cause in operation. It would be desirable that this difference should be incontestably established. And the subject would be further elucidated if the parentage of the criminals and paupers were given in the returns. I mean by this the natiivities of both their fathers and mothers, and also, in the census, the natiivities of the parents of the whole population. If the corrupt element of foreign parentage could be deducted, I believe the real *American* portion would be very small indeed. Pray excuse my having troubled you with so long a letter. I shall be most happy to see you if ever you are in *London*. Meanwhile believe me, my dear sir, yours very sincerely,
ROBERT EVEREST.

CHRONICLES OF THE GOVERNMENT AND PEOPLE OF THE UNITED STATES.

The experiment of a people governing themselves wisely had never been crowned with permanent success in any age of the world up to the time the American colonies dissolved their connexion with Great Britain. We should like to bestow on the individual actors in our revolutionary struggle, both in the council and in the field, the meed of praise so justly due; but the limits of an article like the present forbid. We have taken some pains to condense a variety of matter which will explain itself, without any extended comment or observation from us.

Our purpose is to show by tables the number of delegates in general convention at three noted periods in our history, viz: when the Declaration of Independence was signed in 1776; when the articles of confederation were entered into, 1778, and when the federal Constitution was formed in 1787:

States.	1776.	• 1778.	1787.
1. Massachusetts	5	6	2
2. New Hampshire	3	2	2
3. Rhode Island	2	3	0
4. Connecticut	4	5	2
5. New York	4	4	1
6. New Jersey	5	2	4
7. Pennsylvania	9	5	8
8. Delaware	3	3	5
9. Maryland	4	2	3
10. Virginia	7	5	3
11. North Carolina	3	3	3
12. South Carolina	4	5	4
13. Georgia	3	3	2
Total	56	46	39

Ten deputies did not attend the convention in 1787, among whom was PATRICK HENRY. Sixteen others who attended did not sign the Constitution; most if not all of them having returned home in despair, or from some cause which they explained to their constituents. Hence, several very interesting letters, throwing light on the proceedings of the convention, collected by Mr. ELLIOTT.

As belonging to the times we also subjoin a table showing the number of delegates in each of the State conventions called to ratify the Constitution, and the length of time they were in session, from which it may be inferred that the subject was maturely examined, even if no record had been preserved like that in Elliott's Debates:

State conventions.	Delegates.	Days.
1 Massachusetts.....	355	35
2 Connecticut.....	124	.....
3 New Hampshire.....	.....	.....
4 New York.....	57	39
5 Pennsylvania.....	68	22
6 Maryland.....	74	.....
7 Virginia.....	150	22
8 North Carolina.....	268	13
9 South Carolina.....	222	127
10 Delaware.....	30	.....
11 Rhode Island.....	.....	.....
12 New Jersey.....	38	.....
13 Georgia.....	26	.....
Total.....	1412	258

As printed in Elliott's Debates, the Constitution does not exceed five hundred lines, as submitted to the State conventions. Most of these bodies, however, proposed amendments and bills of rights which, if adopted, would have made it ten times as lengthy. Even the little State of Rhode Island contributed two hundred and fifty lines as an appendix to the federal Constitution! Many of the States ratified with such caution, and such a multitude of liberty phrases as, at first view, to render it doubtful whether the compact was absolute or conditional.

It was natural that men going into new political relations with each other should guard their rights with vigilance. The convention at Philadelphia was occupied from 25th May until 17th September, 1787, a period of one hundred and thirteen days, in framing the Constitution. So far as disclosed in their journals, the State conventions had an aggregate of fourteen hundred and twelve delegates from counties, and sat from thirteen to one hundred and twenty-seven days, making eleven hundred and twenty-two printed pages of their proceedings, to discuss and settle the meaning of the seventeen pages of the Constitution. It may well be supposed that argument, in all its breadth and ingenuity, distinguished the occasion. Even the great PATRICK HENRY had his fears, and expressed them with an eloquence which none but himself could equal.

The State of North Carolina was so dissatisfied that she felt of Congress to know if she could squeeze into the Constitution about three hundred lines, in the shape of amendments and a declaration of rights, before she would commit herself to the new government. Here is the proof:

“STATE OF NORTH CAROLINA.—In convention, August 1, 1788.

“Resolved, That a declaration of rights asserting and securing from encroachments the great principles of civil and religious liberty, and the unalienable rights of the people, together with amendments to the most ambiguous and exceptionable parts of the said constitution of government, ought to be laid before Congress, and the convention of the States that shall or may be called for the purpose of amending the said constitution, for their consideration, previous to the ratification of the constitution aforesaid, on the part of the State of North Carolina.

“By order: J. HUNT, *Secretary.*”

“SAM. JOHNSTON.

Obtaining no comfort, however, the good old State responded the next year, as follows :

“STATE OF NORTH CAROLINA.—In convention.

“Whereas the general convention which met in Philadelphia, in pursuance of a recommendation of Congress, did recommend to the citizens of the United States a constitution or form of government in the following words, namely:

“We the people,” &c.

[Here follows the constitution of the United States, *verbatim.*]

“Resolved, That this convention, in behalf of the freemen, citizens, and inhabitants of the State of North Carolina, do adopt and ratify the said constitution and form of government.

“Done in convention this twenty-first day of November, one thousand seven hundred and eighty-nine.

“SAMUEL JOHNSTON *President of the Convention.*

“J. HUNT, JAMES TAYLOR, *Secretaries.*

While copying from this source we add the credentials of a deputy to act in behalf of the State. Similar commissions were issued by the other States to all their deputies to the federal convention :

“THE STATE OF NORTH CAROLINA.

“*To the Hon. Richard Dobbs Spaight, Esq., greeting :*

“Whereas our general assembly, in their late session, holden at Fayetteville, by adjournment, in the month of January last, did, by joint ballot of the senate and house of commons, elect Richard Caswell, Alexander Martin, William Richardson Davie, Richard Dobbs Spaight, and Willie Jones, esqs., deputies to attend a convention of delegates from the several United States of America, proposed to be held in the city of Philadelphia in May next, for the purpose of revising the federal Constitution.

“We do therefore, by these presents, nominate, commissionate, and appoint you, the said Richard Dobbs Spaight, one of the deputies for and in behalf of us, to meet with our other deputies at Philadelphia, on the first day of May next, and with them, or any two of them, to confer with such deputies as may have been or shall be appointed by the other States for the purposes aforesaid ; to hold, exercise, and enjoy the said appointment, with all powers, authorities, and emoluments to the same incident and belonging, or in anywise appertaining, you conforming in every instance to the act of our said assembly under which you are appointed.

“Witness, Richard Caswell, esq., our governor, captain general and commander-in-chief, under his hand and our great seal, at Kinsten, the 14th day of April, in the eleventh year of our independence, A. D. 1787.

“RICHARD CASWELL.

“By his excellency’s command.

“WINSTON CASWELL,

“*Private Secretary.*”

As a matter of curiosity, rather than of any solid importance, we give in parallel columns a passage from the Meck-

lenburg declaration of independence, adopted at Charlotte, North Carolina, May 20, 1775, and the concluding sentence of the declaration at Philadelphia, July 4, 1776:

**Dr. Brevard, 1775.*

"To the maintenance of which independence, we solemnly pledge to each other our mutual co-operation, *our lives, our fortunes, and our most sacred honor.*"

Mr. Jefferson, 1776.

"And for the support of this declaration, with a firm reliance on the protection of Divine Providence, we mutually pledge to each other *our lives, our fortunes, and our sacred honor.*"

This similarity of phrase led to a charge of plagiarism against Mr. Jefferson, to support which a pamphlet was circulated, without seriously injuring the sage of Monticello, who, even if he had seen the Charlotte declaration, was at liberty to use the same expressions, because nothing else would answer as well. In no other point do the two declarations resemble, except in spirit, which was common to all patriots of that day.

It is melancholy to reflect on the tragical death of Governor SPAIGHT. He was killed in a duel with the Hon. JOHN STANLY, in 1802, at the fourth exchange of shots. Mr. STANLY was a gifted, bold, and eloquent man—was a representative in Congress from North Carolina in 1801 and in 1809. He was stricken with paralysis in debate, while speaker of the house of commons, in 1827, and lingered in a helpless condition until his death, August 3, 1833. The Hon. EDWARD STANLY is one of his sons.

One of the signers of the Declaration of Independence (the Hon. BURTON GWINNETT, of Georgia) also perished in the same manner, under his own challenge to General LACHLAN McINTOSH, May 27, 1777.

While on this painful subject, the loss of public benefactors by the code of honor, (as it is with doubtful propriety called,) we cannot pass over the noblest victim of them all. ALEXANDER HAMILTON, the bosom friend of WASHINGTON, the only signer of the federal Constitution from the State of New York, fell in single combat with AARON BURR, July 11, 1804, "on the same spot where, a short time previously, his eldest son had been killed in a duel."†

Although we make no attempt to mention all or even any considerable number of the great men of the revolution, yet we consider it eminently due, as a double honor to their memories, to state the fact, that FRANKLIN, R. MORRIS, CLYMER, WILSON, SHERMAN, and READ, attached their signatures to the Declaration in 1776, and to the Constitution of the

* Wheeler's History of North Carolina, vol. 1, page 69.

† American Encyclopedia, vol. 6, page 153.

United States in 1787. Great and felicitous as these names appear, the heart saddens at the fate of ROBERT MORRIS. He was the great financier of the revolution, possessed immense wealth, and often borrowed money on his own individual credit for the use of Congress, when a pledge of the public faith was insufficient. In value his services ranked next to those of General WASHINGTON, for while one commanded in the field the other fed and clothed the army. MORRIS was offered the Treasury Department in 1789, which he declined, and being requested by General WASHINGTON to name a suitable man for the office, he recommended HAMILTON.

Writing from Paris, in 1782, Dr. FRANKLIN* said to Mr. MORRIS :

“ Your conduct, activity, and address, as financier and provider for the exigencies of the State, is much admired and praised here, its good consequences being so evident, particularly with regard to the rising credit of our country and the value of bills.”

After a long career of prosperity and triumphs for the public good, the illustrious patriot, ROBERT MORRIS, suffered reverses of fortune in his old age from land speculations, and died in penury, May 8, 1806, in his seventy-third year.

We pass to another topic, to which we shall mainly confine our remarks. As a basis we annex the following table, showing the appointment of representatives in Congress from each State under different enumerations :

States.	1790.	1800.	1810.	1820.	1830.	1840.	1850.
1 New York	10	17	27	34	40	34	33
2 Pennsylvania.....	13	18	23	26	28	24	25
3 Ohio.....		1	6	14	19	21	21
4 Virginia	19	22	23	22	21	15	13
5 Massachusetts	14	17	20	13	12	10	11
6 Indiana.....			1	3	7	10	11
7 Tennessee.....	1	3	6	9	13	11	11
8 Kentucky	2	6	10	12	13	10	10
9 Illinois				1	3	7	9
10 North Carolina.....	10	12	13	13	13	9	8
11 Georgia	2	4	6	7	9	8	8
12 Alabama.....				3	5	7	7
13 Missouri.....				1	2	5	7
14 Maine				7	8	7	6
15 Maryland.....	8	9	9	9	8	6	6
16 South Carolina.....	6	8	9	9	9	7	6
17 New Jersey.....	5	6	6	6	6	5	5
18 Mississippi.....				1	2	4	5
19 Connecticut.....	7	7	7	6	6	4	4
20 Louisiana			1	3	3	4	4
21 Michigan					1	3	4
22 New Hampshire.....	4	5	6	6	5	4	3

* Sanderson's Lives of the Signers, vol. 5, page 357.

TABLE—Continued.

States.	1790.	1800.	1810.	1820.	1830.	1840.	1850.
23 Vermont.....	2	4	6	5	5	4	3
24 Wisconsin.....							3
25 Rhode Island.....	2	2	2	2	2	2	2
26 Arkansas.....					1	1	2
27 Iowa.....							2
28 Texas.....							2
29 California.....							2
30 Delaware.....	1	1	2	1	1	1	1
31 Florida.....							1
Total.....	106	142	183	213	242	223	234

As connected with representation in Congress we give below a table showing the number of each class of persons, with the aggregate; and also the cost of each census—all condensed from the tables prepared by Mr. DE Bow, late Superintendent of the Census:

Years.	Whites.	Free persons of color.	Slaves.	Total.	Cost.
1790	3,172,464	59,456	697,897	3,929,827	44,377
1800	4,304,489	108,395	893,041	5,305,925	66,109
1810	5,862,004	186,446	1,191,364	7,239,814	178,444
1820	7,861,937	233,524	1,538,038	9,638,131	208,525
1830	10,537,378	319,599	2,009,043	12,866,020	378,545
1840	14,195,695	386,303	2,487,445	17,069,453	832,370
1850	19,553,068	434,495	3,204,313	23,191,876	1,318,027
Total.....					3,026,397

It is thus shown that the population of the United States doubles about every twenty-five years. At this rate, in one hundred years hence, the inhabitants will be four hundred millions—equal to 120 to every square mile within the jurisdiction of our government, say total 2,306,865 square miles, including the Indian and Northwest territory. Mr. DE Bow has introduced in the compendium of Census Statistics the following elaborate table for 1850:

Aggregate population and density of the States and Territories.

STATES.	POPULATION.							DENSITY.	
	1790.	1800.	1810.	1820.	1830.	1840.	1850.	1840.	1850.
Alabama.....				127,901	809,827	890,758	771,628	11.65	15.21
Arkansas.....				14,278	80,889	97,874	209,897	1.87	4.08
California.....							23,597		.59
Col., Dist. of.....		14,098	24,028	38,039	89,884	48,719	51,037	487.12	861.45
Connecticut.....	288,141	251,002	262,042	275,903	297,875	309,978	270,792	66.82	79.88
Delaware.....	59,096	64,273	72,674	79,749	76,748	78,060	91,582	86.53	48.18

Aggregate population and density of the States and Territories—Continued.

STATES.	POPULATION.									DENSITY.	
	1790.	1800.	1810.	1820.	1830.	1840.	1850.	1840.	1850.		
Florida					84,780	54,477	87,445	0.92	1.48		
Georgia	82,548	162,101	252,433	840,937	516,823	691,892	906,155	11.93	15.62		
Illinois			12,282	55,211	157,445	476,183	861,470	8.59	15.87		
Indiana		4,875	24,520	147,178	343,081	685,566	938,416	20.28	29.24		
Iowa						43,112	192,214	0.85	3.78		
Kentucky ..	78,077	220,953	406,511	564,817	687,917	779,525	992,405	20.70	26.07		
Louisiana ..			76,656	158,407	215,739	352,411	517,762	8.54	12.55		
Maine	96,540	151,719	228,705	298,885	399,455	501,793	638,169	15.80	18.86		
Maryland ..	819,728	841,548	880,546	407,850	447,040	470,019	533,034	42.25	52.41		
Massachus'ts	878,717	423,245	472,040	523,287	610,408	787,699	994,514	94.58	127.50		
Michigan ..			4,762	8,896	31,689	212,267	397,604	3.77	7.07		
Mississippi..		8,860	40,852	75,448	136,621	375,651	806,326	7.97	12.86		
Missouri ..			20,845	66,536	140,455	388,702	682,044	5.69	10.12		
New Hamp ..	141,899	183,762	214,860	244,161	269,828	284,574	317,976	30.67	34.26		
New Jersey ..	184,139	211,949	245,555	277,575	320,823	378,806	489,555	44.87	53.84		
New York ..	340,120	536,756	859,049	1,872,812	1,918,608	2,428,921	3,097,394	51.68	65.90		
N. Carolina ..	398,751	478,103	555,500	688,929	787,957	753,419	569,699	14.86	17.14		
Ohio		45,865	280,760	631,434	937,903	1,519,467	1,950,329	38.69	49.55		
Penn'svania	484,878	602,361	810,091	1,049,458	1,348,233	1,724,088	2,811,756	87.48	50.26		
Rhode Isl'nd	69,110	69,122	77,081	88,059	97,199	106,830	147,545	83.83	113.97		
S. Carolina ..	249,073	345,591	415,115	502,741	581,185	594,398	663,507	20.23	22.75		
Tennessee ..	85,791	105,602	261,727	422,813	681,904	829,210	1,002,717	18.18	21.99		
Texas							212,532		0.89		
Vermont	85,416	154,465	217,718	235,764	280,652	291,948	314,120	28.59	30.76		
Virginia	748,808	880,200	974,622	1,065,879	1,211,405	1,289,797	1,421,661	20.21	23.17		
Wisconsin ..						30,945		0.57	5.66		
<i>Territories.</i>											
Minnesota ..							6,077		0.04		
New Mexico ..							61,547		0.80		
Oregon							13,294		0.07		
Utah							11,850		0.04		
		5305,987		9,688,191	65,818	66,100					
		a less 12		a less 60							
Total	8929,827	5805,925	7239,814	9,688,181	12,866,020	17,069,458	23,191,576	9.55	7.90		

a Deducted to make the totals published incorrectly in those years. b Persons on board vessels of war in the United States naval service. c A later statement from the State Department for the same year gave Alabama a total of 144,817.

Colonial population.

COLONIES.	COLONIAL POPULATION.			Increase per cent. first 48 years.	Increase per cent. per annum.	Increase per cent. 2d period, 26 yrs.	Increase per cent. per annum.	Increase per cent. in 74 years.	Increase per ct. per annum. in 74 years.
	1761.	1749.	1775.						
Connecticut ..	30,000	100,000	262,000	288.88	4.65	162.00	6.23	773.88	10.45
Delaware		Incl. in Pa.	87,000						
Georgia		6,000	27,000						
Maryland	25,000	85,000	174,000	240.00	5.00	104.71	4.00	596.00	8.05
Massachusetts ..	70,000	220,000	352,000	214.29	4.46	60.00	2.81	402.56	5.44
New Hamp	10,000	30,000	102,000	300.00	4.17	240.00	9.23	920.00	12.43
New Jersey	15,000	60,000	183,000	300.00	6.25	180.00	5.00	520.00	11.08
New York	30,000	100,000	283,000	283.33	4.86	185.00	5.81	693.33	9.37
North Carolina ..	5,000	45,000	151,000	300.00	16.67	302.22	11.63	3,520.00	47.57
Pennsylvania	20,000	250,000	841,000	1,150.00	23.96	36.40	1.40	1,605.00	21.69
Rhode Island	10,000	35,000	68,000	250.00	5.21	65.71	2.53	480.00	6.49
South Carolina ..	7,000	30,000	93,000	323.57	6.84	210.00	8.08	1,223.57	16.60
Virginia	40,000	85,000	300,000	112.50	2.34	292.94	9.73	650.00	8.73
Whites			2,303,000						
Slaves, estim'd ..			500,000						
All classes	262,000	1,046,000	2,803,000	299.24	6.23	167.97	6.46	969.85	13.11

We now proceed to give a table of our own, exhibiting the

cost of legislation, or rather the pay of members, from the first to the thirty-third Congress, inclusive. To arrive at the sums we estimate the long sessions of Congress at seven months, and the short sessions at three months, making ten months or three hundred days to each Congress. Multiply by the number of senators and representatives from each State, according to the several apportionments, and the number of days in Congress will appear, which at eight dollars per day will show the aggregate. As to mileage we take the Post Office Directory as to distances between the capital of each State and the city of Washington; then allow eight dollars for every twenty miles' travel, going and returning, and the mileage is produced. We only claim for the table an approximation to the facts. The pay-roll of members may be different—certainly to no great extent. The four extra sessions of Congress and the special convocation of senators for executive purposes have not been included.

Table showing the pay and mileage of members of Congress from each State from March 4, 1789, to March 4, 1855.

States.	Days.	Pay.	Miles.	Mileage.	Total pay.
1 New York.....	289,000	\$2,312,000	370	\$577,220	\$2,889,220
2 Pennsylvania.....	240,300	1,922,400	124	158,910	2,081,310
3 Ohio.....	127,200	1,017,600	458	310,706	1,328,306
4 Virginia.....	214,500	1,716,000	129	145,230	1,860,230
5 Massachusetts.....	153,700	1,229,600	440	371,416	1,601,016
6 Indiana.....	55,200	441,600	635	196,944	638,544
7 Tennessee.....	102,200	817,600	885	444,624	1,262,224
8 Kentucky.....	109,200	872,600	649	384,058	1,256,658
9 Illinois.....	55,200	441,600	847	159,782	601,382
10 North Carolina.....	132,000	1,056,000	304	212,640	1,268,640
11 Georgia.....	81,000	648,000	848	366,120	1,014,120
12 Alabama.....	41,400	331,200	1035	216,992	548,192
13 Missouri.....	29,100	232,800	991	161,568	394,368
14 Maine.....	49,200	393,600	608	153,576	547,176
15 Maryland.....	98,700	789,600	43	22,362	811,962
16 South Carolina.....	95,400	763,200	528	263,456	1,036,656
17 New Jersey.....	75,300	602,400	166	66,264	668,664
18 Mississippi.....	26,700	213,600	1333	176,956	390,556
19 Connecticut.....	79,900	639,200	312	130,978	770,178
20 Louisiana.....	33,900	271,200	1172	214,962	486,162
21 Michigan.....	17,400	139,200	589	52,780	191,980
22 New Hampshire.....	65,700	525,600	518	184,300	709,900
23 Vermont.....	61,500	492,000	557	182,450	674,450
24 Wisconsin.....	4,500	36,000	1025	30,750	66,750
25 Rhode Island.....	39,600	316,800	400	42,240	359,040
26 Arkansas.....	12,600	100,800	1657	111,300	212,100
27 Iowa.....	3,600	28,800	1107	21,240	50,040
28 Texas.....	3,600	28,800	2121	40,704	69,504
29 California.....	3,600	28,800	3500*	59,600	88,400
30 Delaware.....	31,200	249,600	158	26,208	275,808
31 Florida.....	2,700	21,600	1069	19,248	49,848
Total.....	2,355,100	18,680,800	.....	5,515,578	24,196,378

* Supposed.

In looking over the record of members of Congress for the last sixty-six years, during which that body has existed under the Constitution, we find celebrated names. We venture to select only a few, placed, by universal accord, beyond all competition. The immortal trio who shed lustre upon the national councils for thirty years—CALHOUN, CLAY, and WEBSTER—were in no respect inferior to BURKE, FOX, and PITT, the pride of the English parliament in its palmiest days. At a former time, and in part contemporaneously, such men as DE WITT CLINTON, ALBERT GALLATIN, RUFUS KING, JAMES A. BAYARD, ROBERT GOODLOE HARPER, WILLIAM PINKNEY, RICHARD HENRY LEE, WILLIAM B. GILES, JOHN RANDOLPH, BENJAMIN WATKINS LEIGH, ROBERT Y. HAYNE, EDWARD LIVINGSTON, FELIX GRUNDY, JOHN ROWAN, WILLIAM H. CRAWFORD, JOHN FORSYTH, GEORGE POINDEXTER, SILAS WRIGHT, GEORGE MCDUFFIE, and others, have adorned the Senate with proud intellectual trophies.

In connexion with the House of Representatives we could specify many exalted names, but we decline a task which might seem invidious. We shall be content to observe that JOHN MARSHALL and WILLIAM LOWNDES had true greatness enough to give eclat to the popular branch of Congress, even if such scholars as HUGH S. LEGARE and RICHARD HENRY WILDE had never vindicated, by their example, the glory of letters. Those senators and representatives are all in the grave; their glory belongs to the country.

We shall not indulge reflections on the brief tenure of life while speaking of the dead of Congress—those who rest in the cemetery at Washington, as well as the large portion who sleep near their family mansions. The chaplains, with impressive solemnity, have often discoursed on this subject. COOKMAN, who was lost in the steamship President; BASCOM, who with lofty strains of reasoning and pure eloquence awed the human mind; and MAFFITT who, with silvery voice and rich imagination, delighted the largest audiences, have gone to that future of which they admonished others.

At this point we look back and inquire how many representatives of the people have closed their earthly career since the organization of the government. To give this question a fair reply we must first ascertain the number of individuals who have been elected from the States to Congress. There have been thirty-three regular elections, varying as to representation under each apportionment.

Table showing the aggregate number of Representatives in Congress from each State from March 4, 1787, to March 4, 1855, inclusive.

States.	Elected.	States.	Elected.
1 New York.....	909	18 Alabama.....	96
2 Pennsylvania.....	735	19 Illinois.....	82
3 Virginia.....	649	20 Louisiana.....	67
4 Massachusetts.....	463	21 Rhode Island.....	66
5 Ohio.....	368	22 Missouri.....	61
6 North Carolina.....	374	23 Mississippi.....	50
7 Kentucky.....	300	24 Delaware.....	38
8 South Carolina.....	298	25 Michigan.....	32
9 Maryland.....	263	26 Arkansas.....	16
10 Tennessee.....	248	27 Wisconsin.....	9
11 Georgia.....	204	28 California.....	6
12 Connecticut.....	197	29 Iowa.....	6
13 New Jersey.....	185	30 Texas.....	6
14 New Hampshire.....	159	31 Florida.....	3
15 Vermont.....	139		
16 Maine.....	138	Total.....	6,305
17 Indiana.....	138		

There is no method of classification that occurs to us to show the probable number of individuals who sat in Congress. Often we find one member in the House ten years, a few twenty, others only two years. We shall frame no bill of mortality on this fluctuating basis to frighten the living, nor shall we claim for members of Congress exemption from the common fate. They take the hazard like the balance of us, only their dust is a little more respected, as that of all faithful public servants ought to be.

With regard to fame in Congress and the activity of members we have some observations to make. From the Congressional Globe, sketching the debates of the first session of the late Congress, we have prepared a statement showing the frequency with which the names of certain members appear in the proceedings. We have selected ten senators and ten representatives who, from the space allotted to them in the index to the three volumes of the Globe, (besides the appendix,) are shown to be often on the floor. The figures signify that the names may be found on an equal number of pages.

Table referring to debate, motions, &c.

In Senate.	Times.	In House of Representatives.	Times.
1 Hunter, Virginia.....	335	G. W. Jones, Tennessee.....	703
2 Badger, North Carolina.....	254	Houston, Alabama.....	378
3 Walker, California.....	241	Orr, South Carolina.....	341
4 Shields, Illinois.....	202	Haven, New York.....	399
5 Cass, Michigan.....	190	Campbell, Ohio.....	266
6 Pratt, Maryland.....	185	Clingman, North Carolina.....	256
7 Bayard, Delaware.....	183	Smith, Virginia.....	233
8 Douglass, Illinois.....	183	Richardson, Illinois.....	195
9 Rusk, Texas.....	168	Bayly, Virginia.....	173
10 Dawson, Georgia.....	144	Phillips, Alabama.....	123

The reader may possibly conclude that influence in Congress, might of character, and acknowledged ability are in

proportion to the noise a member makes, as indicated by the above table. Nothing is more erroneous; the very opposite is nearest the fact. Too much speaking is fatal to a member's usefulness; he often becomes disagreeable, and thereby defeats his own purposes. It so happens that the Senator from Virginia named first in the table is an exceedingly able man, and his position as chairman of the Committee on Finance rendered him still more prominent on the floor in making reports and explanations. But we do not perceive by the arrangement of the committees in the House that some of the members who figured several hundred times at one session had any official labors to stimulate their zeal and industry. The representatives from Virginia and Alabama, last in the table, were among the choice debaters in the House; and one of them, as chairman of the Committee on Foreign Relations, was necessarily on his feet more frequently than he would otherwise have been. We have said this much in justice to members whose *marks of merit* are less in number. In the meantime we intend no disparagement to any.

As a general rule we forbear expressing opinions as to the relative worth and ability of living statesmen. There is one, however, peculiarly connected with the past, to whom we shall refer with special satisfaction. We mean General CASS. The high public employments he has filled, as governor of Michigan, Secretary of War, minister to France, and senator of the United States, to say nothing of a canvass for the presidency, entitle him to, as he enjoys, the warm affections of his countrymen. When his late compeers, CALHOUN, CLAY, and WEBSTER, ceased, by death, to mould public measures and animate the popular mind, giving strength by their presence, General CASS succeeded to their place, (if that were possible to any man,) in virtue of seniority, and that ripeness of qualification, that high moral tone, so essential to the public man, and of which he is so eminent an example. The people feel safe while he is in action, for they know he is patriotic, dignified, and intelligent. At the first session of the last Congress he addressed the Senate on the following subjects:

1. In regard to the Clayton-Bulwer treaty.
2. Touching the mission of the Pope's nuncio to the United States.
3. On the bill granting land to Wisconsin for a railroad.
4. On the call for correspondence in relation to the seizure of Martin Koszta.
5. On our relations with France and England.
6. Relative to the religious rights of American citizens abroad.

7. On the homestead bill.
8. On the bill granting lands for the benefit of the indigent insane, vetoed by the President.
9. On the bill to provide for the final settlement of the claims of the officers of the revolutionary army, &c.
10. On the resolutions of the general assembly of Connecticut relating to the repeal of the Missouri compromise, &c.

From this abstract it will be seen how earnestly he applied himself to questions of leading public interest. General CASS goes to the foundation, lays open facts, reasons logically, and is at all times courteous in his bearing. Whoever desires information upon a subject which he has discussed can readily obtain it from his speeches. We make a single extract, because it throws light on a matter not generally understood.

Having offered a resolution calling on the President for a copy of any correspondence which may have taken place with the government of the Papal States touching a mission to the United States, General CASS said :

“ The Senate is aware that a distinguished foreigner from the Roman States arrived in our country sometime since, and that he has been visiting different portions of it. It is reported, and I believe correctly, that he is clothed with some mission giving him a public character in this country. I understand he is the nuncio to Brazil, and that he has been instructed to stop in the United States, and to have an autograph letter, as it is called, from the Pope to the President of the United States. It is a common procedure in Europe, and it is intended as a compliment and a mark of good feeling towards the people of the United States. There is nothing in the arrival of this agent, whatever may be the character of his duties, which should give alarm to the most jealous sectarian. He does not come in any sacerdotal character, as the representative of the sovereign pontiff, the head of the Catholic religion, but he comes as the representative of a temporal prince, ruling over a considerable portion of Italy, and especially that portion of it endeared to us by many a glorious recollection, where large numbers of our countrymen are always residing, needing the protection of the government, and with which we have important commercial intercourse. I understand, sir, that the proceedings which led to this mission were conducted in the most unexceptionable manner. The American *chargé* at Rome was sent for by the cardinal secretary of state, and the intention was made known to him, and he was asked whether he thought the measure would be acceptable to the people of the United States. He answered, as he ought, that he had no doubt that the representative would be highly received and hospitably treated in our country, and that the step would be received, as it was intended, as complimentary to the people of the United States. And I do hope that the pledge thus given will be as sacredly redeemed as is now in our power. The Pope has given evidence of kind personal feelings towards this country which entitles him to special regard. He is among the very few sovereigns of Europe who have contributed towards the monument now being constructed in this city to the memory of Washington. He has sent a block of marble, hallowed by its association with the relics of the empire republic, to make part of our national testimonial to one whom, to honor, is to honor our country and human nature.”

The fathers of the republic are gone ; the second generation since has almost passed away ; and now, in the midst of a sanguine and progressive age, we are pushing the conquests of civilization throughout the western world. General CASS is, perhaps, the only civilian now in service, whose youth

mingled with the sages of the revolution. His career has been one of honorable success, and long may he live to promote the good of his country.

On a proud eminence, and as belonging to a class of men nearly extinct, three other names occur to us deserving a grateful tribute. Other than the three, we mention no more living in the balance of this paper. We have no fear of exciting jealousy by the record. BERRIEN, EVERETT, and PRESTON, each in himself unites the Ciceronian elements of character, in a degree never excelled in our country; ripe scholarship, faultless oratory, and the highest moral cultivation. As stars of fixed magnitude, long may they adorn the horizon of freedom and literature, to win our youth to greatness in the same paths!

With such names as we have introduced in the course of this article, and others familiar to the public, always present to our thoughts, we are apt to pronounce the race of great men as forever gone, and that the actors now on the political stage can never achieve equal celebrity. True, the material is different; the same influences that marked out WASHINGTON, FRANKLIN, and HENRY, and made them the wonder of mankind, may never be brought to bear again, to develop character. In their day, intelligence was less diffused among the people than at present; it was locked up in few minds, and its exhibition was the more striking on that account. A man who could write in good style was a prodigy; respectable gifts of speech secured distinction to the possessor at once. We honor the men of the revolution, heroes, jurists, and statesmen, authors, artists and bards, and we hope ever to venerate them; still, we do not yield to them superiority over the men now in action, and those preparing for the public arena. We briefly give some of our reasons.

Let any man take up the four volumes of the Congressional Globe and Appendix, in all, thirty-five hundred quarto pages, for the first session of the thirty-third Congress, and let him read the conversational debates, and those of a more formal character, as given by the reporters, and he will find talent, wit, humor, searching argument, keen invective, bold eloquence, and stores of historical and diplomatic information, with a facility of applying it, that will astonish him. We know that the mind is there; mind that is improving; every stroke of the hammer eliminates a spark and strengthens the metal. And lest we might be suspected of a very high degree of *juniorship* in such matters, we frankly state that the handsome dress in which most of the debates appear, the harmony of periods, the connexion of ideas, and the order of argument,

are often supplied by the reporters, who have a professional pride to allow no crudities to meet the public eye. We have heard speeches from plain, sluggish, and uncouth men, full of bad English, as delivered, but when printed from the reporter's copy, they were wholly different, though in substance the same; had a face of beauty and learning, and seemed worthy of a practised orator. A few suggestions, and a natural method of stating facts, regardless of the tone of voice, the trembling knees, and the halting phrase, will enable a reporter to write out an excellent speech. Admitting all this to be true, we maintain that there is an amount of talent in the country that will prove sufficient in any emergency that may arise in our political fortunes, foreign or domestic; and especially if men shall be encouraged to effort by the present liberal system of Congressional reporting, and the privilege of publishing speeches superior to those *frightened out* in debate, with entirely new matter, and most elegant finishing, there will be no lack of greatness, *as shown by the record*, to excite the wonder of constituents, and succeeding generations.

As printed, all speeches read well, and most of them appear to possess the same order of ability, even when we know the great disparity between their authors in mental and scholastic advantages. The press is the grand fulcrum on which the lever does its work; builds up men and systems, pulls down and alters at pleasure; gives notoriety on small pretence, and keeps the world wide awake. Nowhere, probably, does such enterprises prosper more than at Washington; for nowhere else can be found such accomplished letter writers, such competition in management, and such *startling conjectures*. The talent of Congress would be comparatively obscure in public estimation, but for the greater talent outside the bar.

The people ought not to complain of any of these seeming abuses, which are the very life of society. Without this reckless, constant vigor of mind and interest in the lobbies of Congress, often proclaiming truth to the benefit or injury of some person or party, we should have no richly flavored political dishes at home; no thunder claps to purify the atmosphere; no shadows to make the sun more beautiful. Look at the tables we have submitted; call to mind the dead and living who have legislated for us, equal in the aggregate to the service of one man in Congress for six thousand four hundred and fifty years, at a cost of twenty-five millions of dollars, *per diem* and mileage; and then reflect upon the *incidentals* since 1789; the expenditure of labor, the anxious

minds, the success and defeat, hopes and disappointments, the wielding of executive patronage, &c., &c. These are all chronicled in newspaper files, from the day the first President communicated with Congress down to the present. We presume that a regular succession of such papers may be found in the Congressional Library, as Mr. JEFFERSON was in the habit of preserving all the gazettes of his day, and they are, no doubt, in his collection attached to the library. It is fair to presume that Niles' Register, the Globe, the Union, National Intelligencer, and other papers subsequent to the period of Mr. Jefferson's husbandry, have also been secured to the library for reference. If not all sustained by the patronage, they are at least the *journals* (or diary) of the government, and as such may be consulted as to current transactions.

We cannot forbear allusion to the stupendous mass of printed matter which has been evolved by the action of the several departments of the government; and we mention the subject only to stir up the public mind to a consideration of some of the topics which may be useful. Several thousand volumes are filled with executive documents and other official papers. We glance at a few heads to indicate the bulk.

With his annual message the President transmits to Congress the reports of the heads of departments. These are often voluminous, and are referred to different committees. For example, the Secretary of State gives a summary of all our foreign intercourse, and usually a copy of the correspondence. The Secretary of the Treasury states the revenue from customs, and other sources, with the value of all imports from each port of entry in the world, the class of merchandise, whether of silks, cotton manufactures, woollens, hardware, wines, fruits, chemicals, &c., and also a list of articles exported from the United States, cotton, corn, wheat, flour, manufactured goods, and everything from land, sea and forest which labor and art have fashioned into use, in minute detail. The other secretaries are as ample within their jurisdiction, touching the army, navy, Indian affairs, post office, and through all the bureaus, all fixed up in guarded style and dignified tone, so necessary in official documents. Upon these are engrafted reports of committees, almost as long. Not having all the data before us, we cannot be precise in this matter; but we happen to possess the report made in the House of Representatives, in 1844, on Rhode Island affairs, (No. 546,) which occupies one thousand and seventy-five pages. Without knowing the fact, we think, however, that reports of that size are not usual. Altogether, they form a

valuable portion of the archives of the government, throwing light on many questions of general interest. The public money could not be better applied than in printing and distributing documents. We shall conclude this paper by some remarks on the report from the Patent Office.

About ten years ago the commissioner issued circulars, in reply to which he was furnished by experienced and successful farmers, mechanics, stock raisers, gardeners, wool growers, and intelligent men of all the leading pursuits in the country, with a variety of facts which he embodied in a report to Congress. A large edition was printed, and sent by the members throughout the land. Since then, the annual contribution from this quarter has been growing in interest, and we now find the Patent Office report in thousands of dwellings, not only among the intelligent, but among the half educated classes, who read it, and experiment upon its directions. There is no estimating the benefit it has already produced. To our knowledge, it has stimulated families, who set but little value on education, to give their children better opportunities, that they may profit by those gifts of Congress. Let other documents find their way among the masses, and an effort will be made by the children and grandchildren of those to whom they sent to hear more about public affairs and the true principles of government.

The people have more penetration and judgment under their rude garbs than men of books or superficial observers are apt to imagine. After reading the President's message, or any other document, they can state the points, and make the application with surprising accuracy. They seize the facts, while other men of more pretensions are led off by the rhetoric of a state paper.

LAW AND LAWYERS—BY THE EDITOR.

No. I.

The plan of the following sketch will be: first—some general observations upon the law as a science; second—the codes that have distinguished it; third—the relation which it sustains to lawyers; fourth—the legal profession; fifth—the bar; sixth—the bench; seventh—the jury; eighth—law learning and subtlety; ninth—law books; tenth—anecdotes of the profession, etc., etc. So that, having presented the bill of fare, we leave the reader to make a comfortable repast—if he can; promising to be quite well satisfied whether he does or not.

Law is a science with which, of course, every one is interested. It is the ligament which binds society together; and the whole machine must tumble into pieces if that ligament be disturbed. Considered abstractly, it marks a relation subsisting between things. Absolute law is paradoxical; to a single, isolated entity, if supposable, the term cannot be applied: unconnected, independent existence admits no notion of law. In every idea of law is involved plurality—plurality and relation. You have an idea, an idea, and a reference from one to the other. Superiority and inferiority are contained in it; law is the language of a superior to an inferior. This is the elementary notion of law, as it is applied to rational existence; any other application is figurative, and founded upon resemblance. When matter undergoes particular changes, under certain forces, we call it a *law* of matter; we say that it is in obedience to the *law* of gravitation that heavenly bodies revolve in their orbits; and that the phenomena exhibited by animal or vegetable nature result from the *laws* of that nature. In all of which cases it is evident that the term law has a different signification from what it has when applied to moral beings. In its reference to matter all motive is excluded—it expresses simply *mode*—action blind and necessary—obedience without the possibility of disobedience.*

Law is natural or revealed. Natural law is discovered by unaided reason; revealed law is furnished us in the pages of holy writ. But are they not both derived from the same source? Nay, are they not but likely the same law? We boastfully claim unaided reason as the tutor of natural law, but does this exclude revelation? Does this exclude a law written upon the heart by the finger of him who made that heart? Human depravity may have obliterated that impress—the same sin which

“ Brought death into the world
And all our wo.”

may have reduced to a taper the lamp which burned in our bosoms, and the mission of revelation been none other than to restore the brilliancy of flame to that faint and flickering light. Revealed law seems but a republication of natural law, and natural law but an earlier revelation.†

We say again that law is divine and human—the one expressive of the revelation between man and his Maker; the other his relation to his fellow man. But is not even this division unphilosophical? Is not the second included in the

* See Paley's Natural Theology.

† 1 Black. Comm. 41.

first? Is not man so related to his Maker that, by observing the duties due to his fellow man, he merits that Maker's favor? And *a converso*.

Again: law is universal and particular; the one prescribed by Deity himself, as at Sinai, the other by legislative councils. What is this again? Does man make that lawful which was unlawful at Sinai? Does he make that unlawful which was lawful or indifferent? Then law and truth are mutable. What shall we say? This: man's law is ancillary to God's; they are not independent and conflicting laws, but the same law under varied expressions. They are similar in their obligation, but have different sanctions. God vindicates his laws in two worlds—man in only one. God takes the offender where man leaves him; man operates in time—God in time and eternity.* The language of inspiration teaches obedience to the "powers that be," as well as to him who "ordained" those powers: "wherefore ye must be subject not only for wrath but for *conscience's sake*;"† again: "put them in mind to be subject to principalities and powers, to obey magistrates, to be ready to every good work."‡ The strength of these commands is to force upon us the conviction that all law co-originate, co-works, and co-obliges.§ But does this preclude iniquitous legislation? Not at all; nor does it inculcate, as it has been absurdly supposed, absolute obedience to human enactments. The subject is one full of difficulties, and we have no disposition to draw the line where obedience becomes a crime and disobedience a virtue. A heathen could say, "The design and object of all law is to determine what is right, honorable, and expedient; and when this is discovered, it is proclaimed as a general ordinance, equal and impartial to all; and this is the origin of law, which, for various reasons, all are under obligations to obey, and especially because all law is the invention and gift of heaven," etc., etc. We borrow the quotation from Mr. Chitty.

On these principles we should expect to find law perfect in proportion as revelation is clear. We mean that revelation which, by way of distinction, has been called the republication of natural law, and such is very nearly the fact. Before such a republication, and in countries where it has not reached, law is the blind expression of benighted reason and unenlightened experience; it may sometimes rise to

* Vid. Paley's *Mer. and Pol. Phil.*

† 13 Romans, 5.

‡ Titus, 5.

§ See Victor Cousin's *Psychology*, for a discussion of the mooted question, "does human law punish offences simply as such?"

dignity, but its march will be slow, and what it gains to-day will be lost to-morrow. Some of the nations of antiquity have been adduced in favor of what law can achieve without revelation ; but observe, 1st, modern Christianity would not be honored by any, even the very best of all their codes. Observe, 2d, these codes are not certainly independent of revelation. Roman was taught by Greek, Greek by Egyptian and Asiatic ; and the question naturally comes up, did Plato, Lycurgus, or Pythagoras, in their travels, learn nothing in the East of the Old Testament writings then extant? Is this plausible? If law be a science, it is one for which man deserves less credit, perhaps, than for any other ; it is one in which he is only to follow his teacher, and he will go right ; be disobedient, and involve all things in inextricable confusion.

But as reflections of this nature may not be agreeable to every reader, bordering somewhat upon the metaphysical, which is growing into disuse, we will pass at once to those general observations which were promised, on the various codes of law highest in celebrity, that have obtained in the different ages of the world. And first, let us pause upon the Jewish contained in the Old Testament Scriptures, and in their traditions, cabbalistic and talmudic. In these laws, besides that which is universal, and, of course, the property of all nations, we have a body of *local* law, calculated for the meridian of Palestine, and for ages anterior to the Christian dispensation. Even this local law is the most valuable code in the world, presenting the ground-work and model upon which most modern institutions have been built ; and where it is not exclusively adapted to the Hebrew state and ceremonial, has reproduced itself, to a greater or less extent, in most of the systems that have been formed. Lawyers and legislators, in all ages, have gone to it for light and instruction, and drawn upon its inexhaustible stores. You can mark its influence everywhere upon European law. In England, more particularly, where you find some of the earlier jurists exhibiting as deep and profound a knowledge of it as the most learned divines. Lord Coke abounds in quotation from its pages. Selden wrote a number of works in its illustration. Algernon Sydney,* in his "Essay upon Government," and Sir William Blackstone, everywhere in his "Commentaries," display a most extensive acquaintance.

Egypt, in the order of time, presents itself next to our notice. The features of Egyptian policy, it is well known,

* Sydney, however, was not a lawyer.

are of a remarkable character. With its judges sworn to the execution of justice, even in defiance of the sovereign—without expense to suitors or admission of advocates; with its care manifested for the education of children; with the extreme severity of its penal code; the infliction of death upon him who could and would not save a life; death for the perjurer; burning for the adulterer; for the calumniator the same punishment he would have brought upon the calumniated; with the trial of the dead, and annual examination into the lives of the citizens, Egypt presents us a most extraordinary system of jurisprudence.

Not less distinguished was Persia. At the earliest ages we find the same elevated conception of justice, and even higher care lavished upon the education of youth. In the punishment inflicted by Cambyses upon the unjust judge, there is an evidence of the former; of the latter, Xenophon, in his *Cyropædia*, is the admirable delineator.

But in passing to Greece and Rome we are upon more familiar ground. Sparta, for hundreds of years, exhibits the same individuality—the same unprecedented, unexampled attitude in the eyes of nations—the problem in history—the anomaly in the world's annals. Athens, fickle, capricious, feeding and thriving upon change; admitting, in Solon, a law-giver suited to its peculiar characteristics;* observing, contemning, building up, tearing down that which had been the toil and the study of his life—the occasion of his death. With the Athenian, it was impossible that law could ever attain to the dignity of a science, or, indeed, to any degree of perfection whatever. In the midst of so versatile a people what power could have erected a system of jurisprudence to be venerated for its wisdom and exhibit within itself any of the elements of duration? The people's character will be recognized in their law, and we would be taught beforehand to expect but little that is truly valuable in the legislation of those whose popular assemblies were a promiscuous concourse, tumultuous, hasty, violent, ever open to the wiles of the demagogue. Self-government had more to do at Athens than the government of law, and the jealousy of an unbridled democracy tended rather to shake off than to strengthen its sanctions. To admire Athens let us look to Athenian art, never to Athenian law. We shall be content with a general enumeration of the institutes that obtained during the most flourishing times of the republic. Upon the court of the Areopagus, so universally celebrated, we need not pause;

*Solon did not pretend that his laws were the best that could be devised, but that "they were the best which Athens was capable of receiving."

its contemporary tribunals were ten in number, four taking cognizance of actions concerning blood, *epi tón phonicón pragmatón*; six of civil^a affair, *epi tón demotikón*. The suppression of the litigious spirit of the people formed no part of Athenian policy. The administration of justice was found a source of profitable revenue to the State, and, of consequence, the causes said to have been heard at Athens were more in number than in all others of the Greek States put together. The sanctions of their laws were as well rewards as punishments; rewards, as the *Proedria* or first place, *Eikón* or statue, *Stephanos* or crown, *Ateleia* or immunity from taxes: punishments, *Atimia*, infamy; *Douleia*, servitude; *Stigmata*, branding; *Desmoi*, chains; *Strakismos*, banishment; *Thanatos*, death, which was either by the sword, the rope, the precipice, poison, cross, or fire.

We come to Rome; much has been said about the mission of Rome, inferior in art, science, philosophy, literature, and genius to the people she was destined to overthrow, how will the "city of the seven hills" compare with all antiquity in law, that element of sterner character? If Rome went to Greece it was to learn anything but law; this was the growth of her own soil, developed in the workings of her own great system, and handed down to us, the most stupendous fabric of antiquity, the most valued relic of that colossal empire whose giant strides shook the world. On the banks of the Tiber was elaborated a system of civil jurisprudence, admirable for its wisdom, for its justice, for its adequacy to meet all the exigencies of a vast people. Built upon the foundations of Numa, through all the stages of the State, the kings, the republic, the empire, its proportions were being shaped and moulded, and when Justinian swayed the sceptre of the East the fabric was complete.* Barbarian invasion—civil discord—chaos, dark and cheerless, for gloomy centuries, involved in night this monument of embodied wisdom, till its accidental reintegration from the rubbish of Amalfi was like the sudden blazing up of a torch or meteor in the groping darkness of midnight.† All Europe was aroused. Justinian, the theme of all applause, the object of all study. Nations rivalled each other in interpolating his principles into their then forming political constitutions, stimulated by a contrast which threw into the shade every other system. On the continent everywhere an obedience to its authority, almost slavish, was sanctioned. But in England a hardier spirit was encountered, a spirit which

* I. Kent Com., 537. Ed. III.

† I. Black., 18.

disdained all innovation from abroad, which rested upon its own vigor and elasticity, and repudiated, in that notable parliament of Merton, the principles that were to be foisted upon the nation. *Et omnes comites et barones una voce responderunt, quod nolunt leges Anglice mutare, quæ hujusque usitate sunt et approbatæ.* The struggle was a temporary one—the voice of Rome could not be hushed. She acted in the closet. She was heard in the forum. Mansfield at last, from her profound sources, drew the elements of that system of commercial law which has immortalized his name. Succeeding jurists and legislators have exhausted these sources. So prophetic a voice had the Latin bard :

Romanos rerum dominos gentemque togatum.

Wonderful is it that Rome has kept up so perpetual an empire over mankind, governing, in successive ages, by her military, by her ecclesiastical, and by her civil power! So true, says Chancellor Kent, are words of D'Aguesseau, that "the grand destinies of Rome are not yet accomplished; she reigns, throughout the world, by her reason, after having ceased to reign by her authority."

During the middle ages mankind were too much engrossed with the crusades, with chivalry, with monkish conceit and scholastic erudition to bestow any attention upon the science of jurisprudence. The hierarchy was too busy in keeping men in the same happy ignorance they enjoyed themselves; whilst the illuminati, the wonderful and angelical doctors, the *quodlibitarians*,* had their hands and heads too much occupied with essences, universals, genera, species and names, to think of anything rational; the very thought too of a Pope and seven cardinals† was enough to dissipate a sensible thought, did one exist. With the revival of letters there came an influence which, operating differently in different nations, broke down the feudal aristocracy, buried in its ruins that monstrous system under whose grasp of death nations had sent up their groans to heaven and prepared the way for the resurrection of the church from the grave in which Rome had buried it. Suddenly a new power is recognized in Europe. International or public law springs up and advances rapidly to a high degree of perfection. It had not even a name in Greece. Rome was too crafty an interpreter of treaties, too arrogant, too domineering to admit its growth. Down to the sixteenth century nothing in Europe had the least appearance of an equitable code of public law.

* D'Isr. Cur. Lit., p. 17.

† Gallileo was compelled to recant his "abominable heresys" before the Pope and seven cardinals. Percy Anec., pt. viii. Science.

At which time, and since, the number of enlightened writers, as Grotius, Vattel, Burlemaqui, Bynkershœck, and others, who have contributed their labors—the clear light which Christianity has imparted—the formation of treaties or conventional laws for purposes of commerce—the settlement of a scale of political rank and precedency—the treatment of prisoners and admission of resident ambassadors, have given to this species of jurisprudence a definite and permanent character, recommending its decisions to the attention and highest regards of every enlightened and civilized nation in the world.*

COTTON IS KING—CONTINUED.†

The second proposition drawn from this excellent treatise is the insuperable aversion of the free colored race to labor in articles most demanded by the markets of the world, namely, rice, sugar, cotton and tobacco. This is established in the most convincing manner by the experience of the West Indies and the United States. It is the result of all the reports, from missionaries and travellers, already referred to. Were it not so, why have Hayti and Jamaica been reduced, by the emancipation of the slaves, to their present miserable condition, little short of the barbarism in which they were involved before the European discovery and settlement of those delicious and luxuriant islands? Can the presence of the white man, now disarmed of his power by law, under a government if anything hostile to him, amid the colored people, account for their degrading aversion to all the necessary labor of society? Hence the expensive introduction of Coolies, Chinese and Portugese, yet with poor success. Can antipathy to the white capitalist and landlord, although ready to compensate the laborer for his work, overgo the inducements of high wages and work too much at the pleasure of the operative, in a market understocked with labor? Can a spirit of mutual hatred and opposition between the races, formerly so disproportioned to each other in their legal condition, still array them against each other, in spite of freedom and wages? Liberia may possibly give some answer to this inquiry; it is at present too short lived to authorize much practical reliance on its example. Why are not the free colored people found on the cheap farming lands of the west and south, as freely

* See a full discussion of this subject in I. Kent Comm.

† Our second form went to press before the receipt of the closing pages of this interesting and able article. Rather than delay the appearance an hour, we insert these pages as a supplementary article. Having received the volume which is reviewed, we insert the tables at full length instead of in condensation.

as in the crowded purlieu of the towns? Yet all observation finds them clubbed in the cities, living from hand to mouth, in the most dependent condition of humanity, thronging the most menial duties of town service? Were this not the disposition of the free colored race among us, why have their warmest and most enlightened friends exerted themselves so heroically, and yet with such circumscribed effect, to procure the establishment of Liberia and to place it under the exclusive government of black men? How feebly the colonization society has succeeded in its noble and philanthropic labors needs but little exposition; it is too little consolatory to its friends to require remark. My purpose is not to depreciate that noble scheme of generous humanity to a downtrodden race, but only to show the repugnance of the free colored race among us to perform the indispensable labors of cultivated and civilized life. They, with true barbarian instinct, prize present ease above future enlarged enjoyment. They prefer the spontaneous and simple products of a most luxuriant soil to all the heightened pleasures of industrious and civilized life. It is the old preference of the savage for his woods and his appetites rather than to labor, and forbear, in order to obtain the refinements of higher cultivation as the reward of Providence and foresight. But we now come to one of the most important and interesting views of our author, and worthy of the strictest attention. It is "the present relations of American slavery to the industrial interests of our own country, to the demands of commerce, and to the present political crisis." This is indeed a most grave aspect of the subject. There are two great parties to these relations, around which all the others are gathered in subordinate attitudes. The first are the cotton manufacturers and the second are the cotton planters. The former aim at the monopoly of the world market for their respective countries of the cotton manufactures; the latter aim at the supply of the cotton for these manufactures wherever they exist. The manufacturing interest wants low cotton and low wages for its workmen; the planting interest wants lands, slaves, machinery, and provisions at the lowest possible rates. In this competition, spreading itself over the whole earth, wherever trade has winged its wide flight, let us see how the various classes and interests of society arrange themselves around these two great social concerns.

And first let us see how this great market has gradually developed itself in the history of the world. It may be best exhibited in the form of tables, as the author has most laboriously done in his appendix.

TABLE I.

Facts in relation to cotton—its growth, manufacture, and influence on commerce, slavery, emancipation, etc., chronologically arranged.

YEARS.	Great Britain annual imp'n & consump'n cotton, from earliest dates to 1858, in pounds.	United States annual exports of cotton to Great Britain and Europe generally.	Great Britain's sources of cotton supplies other than the U. States, with total cotton crop of U. States.	Dates of inventions promoting the growth and manufacture of cotton, and of movements to elevate the African race.
1641	Cotton manufac. first named in English history.			
1697	Total imports. 1,976,359			
1701	1,985,868			
1700 to 1705	av. 1,170,881			
1710	715,008			
1720	1,972,805			
1730	1,545,472			
1741	1,645,031	1747-'48, 7 bags of cotton were shipped from Charleston, S. C., to England.		
1751	2,976,610			
1764	3,870,392	1770, 2,000 lbs. shipped from Charleston.		
1771 to 1775	av. 6,766,613			
1781	5,198,778			
1782	11,828,039			
1783	9,735,663			
1784	11,482,083	71 bags shipped and seized in England, on the ground that America could not produce so much.		
1785	18,400,384			
1786	19,475,020		Imports by Great Britain from— Pounds. Br. W. Indies...5,800,000 French & Spanish colonies...5,500,000 Dutch do...1,600,000 Portug'ese do...2,000,000 Turk & Smyrna.5,000,000 (1789) Cotton crop of the U. S. 1,000,000 lbs.	
1787	23,250,268			
1788	20,467,436			
1789	32,576,023			
1790	31,447,605			
1791	28,706,675	lbs. 189,316		
1792	34,907,497	138,328		
1793	19,040,929	500,000		
1794	24,358,567	1,601,760	Imports by Great Britain from— Pounds. Br. W. Indies.12,000,000 Brazil.....20,000,000 Cotton crop of the U. S. 8,000,000 lbs. Cotton crop of the U. S. 10,000,000 lbs.	
1795	26,401,340	6,276,300		
1796	32,126,357	6,100,000		
1797	23,354,371	3,800,000		
1798	31,880,641	9,330,000		
1799	43,379,278	9,500,000		
				Previous to 1791 Great Britain obtained her supplies of cotton from the West Indies, South America, and the countries around the eastern parts of the Mediterranean.
				Previous to the invention of the machinery named below all carding, spinning, and weaving of wool and cotton had been done by the use of the hand-cards, one-spindle wheels, and common hand-looms. The work, for a long period, was performed in families; but the improved machinery propelled by steam power has so reduced the cost of cotton manufactures that all household manufacturing has long since been abandoned, and the monopoly yielded to capitalists, who now fill the world with cheap fabrics. 1762. Carding machine invented. 1767. Spinning-jenny inv'd. 1769. Spinning roller-frame invented. 1769. Cotton first planted in United States. 1769. Watts' steam-engine patented. Mule-jenny invented. 1776. Virginia forbids foreign slave trade. 1780. Emancipation by Pa. and Mass. 1781. Mullins first made in England. 1784. Emancipation by Ct. and E. Island. 1785. Watts' engine imp'rd and applied to cotton machinery. First mill erected 1788. 1785. New York Abolition Society organized. 1787. Power-loom invented. 1787. Pennsylvania Abolition Society formed. 1787. Slavery excluded from N. W. Terr., including Ohio, Indiana, Illinois, &c. 1789. Franklin issues an appeal for aid to instruct free blacks. 1792. Emancipation by New Hampshire. 1793. Cotton-gin invented. Emancipation by N. York. 1804. Do. by N. Jersey. Cotton consumed in U. S. 200,000 lbs. United States exported to— France..... 750,000 lbs. England.....19,000,000 "

YEARS.	Great Britain annual imp'n & consump'n cotton, from earliest dates to 1858, in pounds.	United States annual exports of cotton to Great Britain and Europe generally.	Great Britain's sources of cotton supplies other than the U. States, with total cotton crop of U. States.	Dates of inventions promoting the growth and manufacture of cotton, and of movements to elevate the African race.
1800	56,010,732	17,789,803	India, first imports from, 1,622,000 lbs.	Louisiana Terr. acquired, including the region between the Mississippi river (upper and lower) and the Mexican line.
1801	56,004,305	20,900,000		United States export to France 4,500,000 lbs.
1802	60,345,600	27,500,000	Cotton crop of the U. S. 20,000,000 lbs.	Fulton started his steam'b't. Slave trade prohibited by United States and England.
1803	53,812,284	41,900,000		1808. Cotton manufacture established at Boston.
1804	61,867,329	38,900,000	Exports from— <i>Pounds.</i>	Cotton consumed in U. S. 4,000,000 lbs.
1805	59,682,406	40,330,000	India..... 20,000,000	Two-thirds of steam-engines in Great Britain employed in cotton spinning, &c.
1806	58,176,283	37,500,000	West Indies... 17,000,000	1813. United States export to France 10,250,000 lbs.
1807	74,925,306	66,200,000	Brasil..... 24,000,000	1815. Power-loom first used in United States.
			Elsewhere 7,000,000	1816. First steam'b't crossed British channel.
1808	43,605,982	12,000,000	Cotton crop of the U. S. 80,000,000 lbs.	1816. Power-loom brought into general use in G. Britain.
1809	92,812,282	53,200,000		Colonization Society organized.
1810	132,488,935	93,900,000	War declared between U. S. and Great Britain.	1819. Florida annexed.
1811	91,576,535	62,200,000		1820. Slave trade declared piracy by Congress. Emigrants to Liberia first sent.
1812	63,025,936	29,000,000	Peace proclaimed between U. S. and G. Britain. Cotton crop United States 125,000,000 pounds.	Benjamin Lundy published his "Genius of Universal Emancipation." <i>Pounds.</i>
1813	50,966,000	19,400,000		U. S. exp. to France 25,000,000
1814	73,728,000	17,800,000		Do...do...do. 40,500,000
1815	96,200,000	83,000,000	Exports from— <i>Pounds.</i>	1825. New York and Erie Canal opened.
1816	97,310,000	81,800,000	West Indies... 9,000,000	1826. Creek Indians removed from Georgia.
1817	126,240,000	95,660,000	Brasil..... 23,000,000	Production and manufacture of cotton now greatly above the consumption, and prices fell so as to produce general distress and stagnation, which continued with more or less intensity through 1828 and 1829. The fall of prices was almost 55 per cent.— <i>Encyc. Amer.</i>
	Total consump.*		India..... 50,000,000	1829. Emancipation in Mexico. <i>Pounds.</i>
			Turkey & Egypt 5,500,000	U. S. exp. to France 75,000,000.
			Elsewhere 6,100,000	1831. Slave insurrection in Virginia.
1818	109,902,000	92,500,000		Wm. L. Garrison declares war against the Colonization Society.
1819	109,518,000	88,000,000	1822, cotton crop of U. States, 210,000,000 lbs.	1839. Ohio canal completed. Cotton consumed in France. 79,067,551 pounds.
1820	120,265,000	127,800,000	Cotton crop of U. States 825,000,000 lbs.	Emancipation in W. Indies commenced.
1821	129,029,000	124,893,405		1834. James G. Birney deserted the Colonization Society.
1822	145,493,000	144,675,095	Imports by G. Britain from Brasil..... lbs. 20,109,540	Gerritt Smith repudiates the Colonization Society.
1823	154,146,000	173,723,270	Turkey & Egypt 9,113,890	1835. U. S. exp. to France 100,380,000 pounds.
1824	165,174,000	142,369,663	E. Ind. & Maur. 85,178,768	
1825	166,831,000	176,449,907	Br. W. Indies.. 1,708,764	
			Elsewhere 964,938	
1826	150,213,000	204,535,415		
1827	197,200,000	294,310,115	1834, cotton crop of U. States, 400,000,000 lbs.	
1828	217,860,000	210,590,463	Imports by G. Britain from Brasil..... lbs. 24,464,505	
1829	219,200,000	264,837,186	Turkey & Egypt 8,413,478	
1830	247,600,000	298,459,102	E. Ind. & Maur. 40,280,064	
1831	262,700,000	276,979,784	Br. W. Indies.. 928,425	
1832	276,900,000	322,215,122	Elsewhere 5,877,215	
1833	287,000,000	324,698,604	Cotton crop of U. States 790,259,479 lbs.	
1834	303,000,000	384,717,907	1840, imports by G. Britain from British West Indies 427,529 lbs.	
1835	326,407,692	387,358,992		
1836	353,684,232	423,631,307		
1837	367,564,752	444,211,537	Imports by G. Britain from India, 1825 to 1839, annual av. 87,600,000 lbs.	
1838	477,206,108	595,952,297		

YEARS.	Great Britain annual imp'n & consump'n cotton, from earliest dates to 1853, in pounds.	United States annual exports of cotton to Great Britain and Europe generally.	Great Britain's sources of cotton supplies other than the U. States, with total cotton crop of U. States.	Dates of inventions promoting the growth and manufacture of cotton, and of movements to elevate the African race.
1839	445,744,000	413,624,212	Imports by G. Britain from India, 1840 to 1844, during Chinese war, 92,800,000 lbs.	1836. Cherokee and Choctaw Indians removed from Georgia, Mississippi and Alabama.
1840	517,254,400	743,941,061	Do from Egypt 82,587,600 pounds.	1837. American Anti-Slavery Society had an income of \$86,000, and 70 agents commissioned.
1841	460,387,200	530,204,100	Imports by Great Britain from—	1838. Colonization Soc. had an income of only \$10,900.
1842	477,339,300	584,717,017	W. I and Dem .. 8,155,000	Cotton consumed in United States 106,000,000 lbs.
1843	555,214,400	792,297,106	Braz. & Port Col. 40,080,400	Value of cotton goods imported into U. S. \$18,286,530.
1844	570,731,200	663,633,455	Mediterranean .. 11,604,000	Texas annexed.
1845	626,496,000	872,905,996	East Indies 91,004,000	Gold discov'd in California.
1846	624,000,000	547,558,055		U. States export to France 151,840,000 lbs. Other continental countries, 128,500,000.
1847	442,416,000	527,219,958		Cotton consumed in United States, 256,000,000 lbs.
1848	602,160,000	814,274,431	Imports by Great Britain from—	1850. Value of U. S. cotton fabrics, \$61,809,184.
1849	624,000,000	1,026,602,269	East Indies ... 72,900,000	1853. Value cotton import. \$27,675,000.
1850	606,000,000	635,361,604	1850....do... 128,300,000	U. States export to England, 763,596,498 lbs.
1851	648,000,000	927,237,089	1852....do... 84,022,482	Do....do.....to continent, 836,271,064 lbs.
1852	817,998,048	1,093,230,639	1853....do... 180,481,496	
1853	746,376,848	1,111,570,370	Cotton crop United States 1,600,000,000 lbs.	

NOTE.—Our commercial year ends June 30; that of England, January 1. This will explain any seeming discrepancy in the imports by her from us, and our exports to her.

N. B. In 1781, Great Britain commenced re-exporting a portion of her imports of cotton to the continent; but the amount did not reach a million of pounds, except in one year, until 1810, when it rose to over eight millions. The next year, however, it fell to a million and a quarter, and only rose, from near that amount, to six millions in 1814 and 1815. From 1818 her consumption, only, of cotton is given, as best representing her relations to slave labor for that commodity. After this date her exports of cotton gradually enlarged, until, in 1853, they reached over one hundred and forty-seven millions of pounds. Of this, over eighty-two millions were derived from the United States, and over fifty-nine millions from India.

In this last year Great Britain imported from India 180,451,496 lbs.; from the United States 768,596,498 lbs.; the United States exported to Europe 335,271,064 lbs.

Thus has the cotton market in the United States risen from zero in 1747, to 1,600,000,000 lbs. in 1853. In this period of little over a century, the export of cotton has risen to a value of \$109,496,404; our own consumption has amounted to a value of \$18,543,596. Our importations of cotton manufactures amounted in 1853 to \$27,675,000. This too when our whole exports except cotton amounted to but \$33,809,126, thus trebling the export of all other articles of foreign trade. The cotton crop, then, is worth to the foreign market \$109,496,404, which, added to our domestic consumption, consisting of \$53,100,290 of home supplies, and \$26,477,950 of foreign supplies, makes a total of \$79,578,240, forming

a grand total of \$180,074,644 as the monied value of the production of cotton in the commerce of the United States.

Nor is the article of cotton, mighty as it is, the only interest in slave labor which the United States possess. They raise, according to the second table of our author, ingeniously and industriously deducted from the Patent and Census Office report, *Abstract of Census*, Rep. Com. Nav., &c., and formed into the following table :

TABLE II.

Tabular statement of agricultural products, domestic animals, &c., exported from the United States; the total value of products and animals raised in the country; and the value of the portion thereof left for home consumption and use, for the year 1853.

	Value of exports.	Total value of products and animals.	Value of portion left for home consumption.
Cattle, and their products ..	\$3,076,897	Cattle, \$400,000,000	\$396,923,103
Horses and mules.....	246,731	300,000,000	299,753,269
Sheep and wool.....	44,375	46,000,000	45,955,625
Hogs, and their products...	6,202,324	Hogs, 160,000,000	153,797,676
Indian corn and meal.....	2,084,051	Corn, 240,000,000	237,915,949
Wheat flour and biscuit....	19,591,817	Wheat, 100,000,000	80,408,183
Rye meal.....	34,186	Rye, 12,600,000	12,565,814
Other grains, and peas and beans.....	165,824	54,144,874	53,979,050
Potatoes.....	152,569	42,400,000	42,247,431
Apples.....	107,283	(1850) 7,723,326	7,616,043
Hay, averaged at \$10 per ton.....	(1850)	(1850) 138,385,790	138,385,790
Hemp.....	18,195	4,272,500	4,254,305
Sugar—cane and maple, &c.	427,216	(1850) 36,900,000	36,472,784
Rice.....	1,657,658	8,750,000	7,092,342
Total.....	33,809,126	1,551,176,490	1,517,367,364
Cotton.....	109,456,404	128,000,000	18,543,596
Tobacco, and its products ..	11,319,319	19,900,000	8,580,681
Total.....	120,775,723	147,900,000	27,124,277

These items swell to a grand total of \$1,699,076,490 in value, of which our own export is, exclusive of \$120,775,723 for cotton and tobacco, only \$33,809,126, but which, added to the value of cotton and tobacco exported, becomes \$154,584,849. In these massy numbers there may be millions amiss, without affecting the general result; this depends on the relative value of free labor and slave. This constitutes the balance of trade between these two kinds of labor, which is the gist of the argument, for the purpose in hand. The ratio may be stated in another form. Slave labor may be represented by \$120,000,000, and free labor by \$33,000,000,

that is, the value of the product of slave labor exports nearly quadruples that of free labor exports.

Our account of indebtedness to slave labor is not yet closed. "Our imports of coffee, tobacco, sugar, and molasses for 1853 amounted in value to \$38,479,000, of which the hand of the slave in Brazil and Cuba supplied the value of \$34,451,000," (page 51,) still these are but four foreign items of the great account between slave labor and free exhibited by the trade of the United States. "Of the domestic grown tobacco, valued at \$19,975,000, and of which we retain nearly one-half, the slave States produce the value of \$16,787,000; of domestic rice, the product of the south, we consume \$9,092,000; of domestic slave-grown sugar and molasses we take for home consumption to the value of \$34,799,000, making our grocery account with *domestic slavery* foot up the sum of \$50,449,000. Our whole indebtedness to slavery, foreign and domestic, for these four commodities, after deducting two millions for re-export, amounts to \$82,607,000. By adding the value of foreign and domestic fabrics consumed annually in the United States to the yearly cost of the groceries which they use, our total indebtedness for articles of slave labor origin will be found swelling up to the enormous sum of \$162,185,240," (page 52.) This is the money incorporation of slave labor in the trade of the United States. Can madness be carried to an extreme that should contemplate its destruction by abolishing the slavery of the negroes employed in its production, or in any other manner destroying the market for the exchange of such enormous masses of human labor for the clothing, the food, and the comforts of mankind?

Were this abolition to be followed by an immediate elevation of the freed race, contrary as it would be to all the laws of human progress, still such a social revolution and disorganization might well demand the soberest consideration and the calmest deliberation. But when all experience, which has hitherto exhibited its light, shows that the success of such abolition is to be followed by every species of social devastation, murder, and massacre, and the return of society to primitive ignorance and barbarity, how can we, with any tolerance for the infatuation of the human mind, brand the conduct with sufficient reprobation? What substitute shall one hundred and thirty-three millions of foreign exports of slave labor find? By what means shall the export of thirty-three millions of free labor in provisions be raised to meet an import of two hundred and fifty millions of foreign commerce? Is it not sufficient to state these mighty questions, pregnant with the very life and substance of society, without following

them into the frightful consequences of mutinous laborers, refusing to work, and rife for every species of social disorder and violence? Must the bloody details of Haytian massacre and revolution, of the barbarism of the Jamaica and Demarara negroes be reiterated in all their horrors, to bring our countrymen to their senses?

And is this enormous product of slave labor supported by itself? Nothing further from the truth. It lives on the products of free labor in provisions, in mechanic arts, in manufacturing labor, and in shipping.

The farmers of the north and the west furnish the pork, the flour, the corn, the horses and mules, and much of the beef to feed and help the slave in his work. The mechanics of New England and the middle States cast and frame their cotton-gins and sugar-house mills, to complete the products of slave labor. The manufacturers of the east and of Europe furnish the cotton fabrics, which their seamen bring in their own shipping built at the north, for the clothing of the slave and his master. How, in the absence of the slave market, shall this vast vacuum of social labor be filled? Let the laborers, the mechanics, the manufacturers, the sailors, the ship carpenters, and the merchants of the free States ponder upon the answer to this most grave inquiry. These various classes form the army of agents employed in the service of King Cotton. They all pant for his employment, eat the sugar and rice, drink the coffee, chew and smoke the tobacco, and wear the cotton which that opulent monarch furnishes from his inexhaustible treasury. Let these various classes clear their hands of any participation with the owners of slaves, by utterly refusing to consume these enjoyments and luxuries, although they have augmented the mass of social happiness, before they brand the slaveholder with their reprobation. Shall it be a question whether we shall continue to wear cotton fabrics or resort to the woollen wares of old, drink coffee, sweeten anything with sugar or molasses, smoke, chew, or snuff tobacco, eat rice, or any way, directly or indirectly, connect ourselves with the consumption of slave products? With whom shall we deal? Not with any people within the northern tropic, or near it; with none of the States of our own confederacy south of Pennsylvania and the Ohio river. And will not our philanthropists preserve their consistency by looking into the condition of the serfs of northern Europe, the workers in hemp and iron, the peons of Mexico, and, in fine, the oppressed of all nations and divisions of men? Will not these modern puritans (I speak it not in

derision of their heroic predecessors, to whom honor enough can never be given) in peace leave a country which they deem contaminated by so direful an evil as domestic slavery? Or will they seclude themselves in some new paradise of their own, with angels at its gates, armed with flaming swords, to keep off the impure, exclaiming, with the priests of antiquity, *Procul, procul est profani!* Avaunt, ye impious!

RAILROADS AND RAILROAD SYSTEM OF FLORIDA.

The writer of the following article for the Review has been twenty years a resident of Florida, and has thus had abundant opportunities of information on the subject he discusses.

The legislature of Florida, at its late session, (1854-'55,) adopted a railroad system which deserves to be generally known throughout the other States, because of their deep interest in its success; for it would be hard to decide whether those having their natural outlets of trade on the Gulf of Mexico are to derive greater benefit by means of these improved facilities of intercourse than those bordering on the Atlantic, or than our remotest States and Territories on the Pacific. The State itself has made a noble provision to aid in carrying out this system; but, until there is a large increase of wealth and population, its completion must be a work of time, unless capital from the other States that are also to derive great advantage from it can be enlisted in its accomplishment.

The internal improvement fund of Florida consists—

1. Of a grant of 500,000 acres of land, made by Congress, in 1845, upon the admission of the State into the Union;
2. Of all the swamp lands, and lands subject to overflow, belonging to the United States, within the State, granted to it in 1850; and
3. Of the proceeds of sales of these lands already made, in money, bonds, and United States and State stocks.

The first of these grants was located, as fast as the government surveys permitted, in bodies of 320 acres or more, and it embraces some of the best lands in the State—only a small part of which is yet sold.

The lands included in the second grant are not yet ascertained, but the locating agents have made sufficient progress to know that the aggregate must amount at least to eight or ten millions of acres. Of course, much of this grant will be of little value; but it also includes a large quantity of the finest lands, easily protected and reclaimed, which will be

much sought for as the contemplated railroads are constructed.

This whole fund, variously estimated, now, at three to six millions of dollars, has been conveyed by the State to *trustees* and set apart to aid and encourage the construction of two great lines of railroad and one important canal. There are already vested rights under this trust; and it cannot, therefore, be withdrawn or modified in any way to the injury of its beneficiaries, or of parties contracting with them upon the faith of it, unless by their consent. In other words, this great fund is now under the jurisdiction of the courts, and no longer under the control of politicians, to be changed or administered according to popular caprice or the whims of demagogues, but must be used according to the settled principles of law and justice, as much as would any lien or trust created by a private individual.

These public works are—

1. A line of railroad between Jacksonville, on St. John's river, (Atlantic,) and Pensacola, or waters of Pensacola bay; with extensions to St. Andrew's bay, and to St. Marks' or Crooked rivers—all on the Gulf of Mexico;
2. A line of railroad from Amelia island, on the Atlantic, to Tampa bay, in south Florida, with an extension to Cedar Key, in east Florida—both on the Gulf of Mexico;
3. A canal from Lake Harney, on St. John's river, to Indian river, on the Atlantic.

These two main lines of railroad will intersect and connect with each other about 15 miles from Jacksonville, and 35 miles from Amelia island, and will open an easy intercommunication between all the habitable parts of Florida, by means of each other, and of St. John's and Indian rivers.

The first of these lines will be 330 or 340 miles long, from east to west, and its extensions to St. Marks' and St. Andrew's will add between 50 and 60 miles more.

The second line, from Fernandina to Tampa, will be about 220 miles long, and its extension to Cedar Key about 30 or 35 miles.

The important consequences likely to result from this system of railroads will be better understood after a brief description of the several ports proposed to be connected.

The bar or entrance to *Fernandina*, on the west side of the north end of Amelia island, affords a short and easy approach from the Atlantic, (of not more than three miles from the bar to the wharves,) by vessels drawing over 20 feet water, into a large and secure harbor.

On the bar at the mouth of St. John's there is about 10

feet water ; but some confidently believe that this bar will be improved so as to admit vessels of 12 or 13 feet draught, up to *Jacksonville*, on one of the noblest rivers of the south.

Both *Fernandina* and *Jacksonville* will be common termini for the business of each railroad, as the law, in express terms, gives the right to the company owning either of these lines, or extensions, to travel on the other with its motive power, without the expense of unloading or changing freight.

The harbor of *Pensacola* is too well known to require any description. Its selection by the United States for a navy yard, and rendezvous of ships of war on the Gulf, is commendation enough.

St. Andrew's bay can be entered by vessels drawing 17 or 18 feet water. The entrance is easy ; the harbor is roomy and safe, being completely land-locked against storms from every point of the compass. The deep water comes up to the shore ; and an elevated table of pine-land extends along this bay for many miles, supplied with numerous springs of pure fresh water, making it even now a favorite summer resort, on account of its pure air and exemption from every local cause for disease.

The bar of *St. Mark's* affords 13 feet and over at ordinary high water, and within it there is a secure roadstead. The shallows between that and the terminus of the railroad (8 or 9 miles above) are mud deposits, sometimes crusted over by thin layers of oyster shells or soft lime rock ; and they can be permanently deepened or removed, at a small comparative cost, so as to carry the full depth of water at the bar quite up to the wharves, which form the terminus of the present railroad from Tallahassee—21 miles long.

It is ascertained, by the recent coast surveys, that the entrance up to *Cedar Key* affords about the same depth of water as that of *St. Marks'*.

At *Tampa bay* 19 or 20 feet of water can be carried up nearly to the head of the western arm of the bay, which extends 40 miles inland.

Then there is *Charlotte harbor*, which can be reached by an extension of railroad 60 or 70 miles further south. The entrance of this harbor will also admit sea steamers of a large size, while it lies within 150 miles of *Key West* and 275 miles from *Havana*.

With his map before him, the reader, having noted these harbors and seaports proposed to be connected by the two main lines of railroad, can easily determine for himself their importance in securing a speedy and safe communication from the Atlantic to the Gulf of Mexico, in whatever direc-

tion beyond commerce and travel are designed to be extended. And the statesman will not fail to perceive the importance of this inland connexion still more clearly, in view of the strength and protection it will afford on an extensive seagirt frontier by rapidly concentrating the means of defence and of aggression.

It is further proposed that the Florida system shall be connected with the great Atlantic seaboard line of railroads by means of a branch of the Savannah, Albany and Gulf railroad, (as authorized by the charter,) to enter Florida east of the Alapaha river, and unite with the Florida roads at no great distance from their junction with each other. This road is now under contract from the city of Savannah to the west side of the Alatomaha river, (including the bridge,) a distance of nearly fifty-two miles, to be finished during the ensuing year, and leaving a gap to be filled up not exceeding one hundred miles—a work that must commend itself to the city of Savannah, and to Brunswick, too—proffering to them a choice of outlets on the Gulf, by new and desirable channels of trade into the tropical parts of Florida, at the same time that it penetrates the heart of Middle and West Florida.

As soon as Savannah makes this branch of her Gulf road, another railroad connexion with Georgia will become immediately and equally desirable for Florida, viz. : by means of an extension of the Southwestern railroad—probably by way of Albany and Thomasville to Tallahassee—of which about 140 miles remain to be built. This will open an important channel of communication down to Florida and the Gulf from Upper, Middle, and Southwestern Georgia, North Alabama, Tennessee, Kentucky, and the northwestern States.

A third railroad connexion also suggests itself from the west side of Apalachicola river into the coal region of Alabama, offering one of the nearest outlets for depositing that important mineral on the shores of both the Atlantic and Gulf of Mexico.

Pensacola, likewise, is seeking her railroad connexion with both Montgomery and Mobile, the latter of which will open an intercourse between Florida and the southwestern States, and, combined with the execution of the Florida system, will ultimately make Pensacola the first city on the Gulf.

Other lines of railroad, preferred by Georgia and Alabama, have been projected into Florida; but such is the peculiar shape of the latter, that the system already adopted must be rigidly adhered to as the only means of binding the remote parts together in a harmony of interest, or else sectional jealousy and final dismemberment will be the inevitable

result. The capital and resources within the State at present are inadequate to build these roads; and it would be hopeless to attempt enlisting aid from abroad, if competing lines of railroad from other States are permitted to reach her Gulf ports in directions contiguous and almost parallel to her main railroad across the northern part of the State. These Gulf ports thus become an important element of Florida railroad capital, and access to them must become subsidiary to her peculiar political and commercial necessities. It is not, therefore, any mean spirit of selfishness or desire to grasp at monopoly, but the stern necessity of self-preservation, that obliges Florida to select the points of junction with railroads from other States. Local interests must not be permitted to mar the good of the whole State; and, fortunately, it demands no real local sacrifice to observe this sound principle of political economy.

This communication, however, is designed to be suggestive only, not to enter upon an argument to sustain the policy of Florida, but rather to make it generally known. The above, therefore, will serve as an epitome of the plans and objects of the State in laying down a system of internal improvements. It remains now to state what are the means at hand, and movements making towards their accomplishment.

In regard to the proposed canal from *Lake Harney*, on the St. John's river, to *Indian river*, on the Atlantic, it is sufficient to say that it will be under fourteen miles long; and that the State proposes to aid in its construction, by a donation of four thousand dollars in money and four thousand acres of land, per mile; "*Provided* that the trustees of the internal improvement fund shall be of opinion that this sum can be so applied without impairing the efficiency of the fund for railroad purposes."

The aid granted by the State to the specified railroads consists—

1st. In a donation of one half of her lands lying within six miles of such road and its extensions; the title, however, not to vest or give a right to sell until a certain portion is finished, and so on, in proportion, as it is finished.

2d. In the authority conferred by law on the trustees of the internal improvement fund, to endorse the bonds of each company to the extent of ten thousand dollars a mile, for the purchase of iron and motive power, as soon as such company has prepared specified distances of its road-bed and wood work to receive the rails. And the trustees are required also to pay the interest accruing on these endorsed bonds, until the road yields an income adequate to meet the interest, and

one per cent. over, to be set apart as a sinking fund annually, to provide for the extinguishment of the principal. To secure these endorsements, the State has a preferred lien on the road and its appurtenances, and has made ample and stringent provisions to guard against any abuses or misapplication of the income and funds of the company by any of its officers. The State makes no original subscription of stock, but for all payments of interest advanced by the trustees they are to receive a corresponding amount in the shares of the company, to be held as by any other stockholder.

The State has also authorized the counties and towns, on the line of any of the specified roads, to subscribe for stock to an amount not exceeding half the cost for construction in such county. This subscription must first be authorized, at a regular election of the legal voters of the county, by a majority of the votes given. To meet instalments on stock so subscribed, as they are called in, the proper authorities, in such town or county corporations, can assess each tax-payer with his proportion of the sum required; and for every hundred dollars so paid such tax-payer shall be entitled to one share, in his own right, of the stock subscribed by the corporation. Or each county or town may issue its bonds to pay instalments on stock, bearing an interest not exceeding *ten* per cent. a year, and lay a tax only sufficient to meet the interest, until the income of the road will pay it. As the private property of every citizen or corporator in each county or town becomes liable to pay all such debts, the security is most ample and undoubted. The counties and railroad companies have fixed on *eight* per cent. as the maximum interest, which is itself a high rate. Their bonds, therefore, constitute a very desirable fund for investment, and will be much sought after, when their true character becomes known amongst capitalists.

Private subscriptions make up the remaining resource within the State for means to construct the several railroads, and the probable extent of these will be stated as the several companies undertaking portions of the different lines are enumerated.

A part of the line of railroad from Fernandina to Tampa Bay is embraced by the charter of the "Florida Railroad Company." That company had undertaken to build a railroad from Fernandina to Cedar Key, about 150 miles, and its books of subscription had been closed before the late law granting State aid was passed. The greater part of its stock is held by capitalists out of the State, and none of the counties on that line have been invited to take stock. The route was surveyed last year, and a contract for constructing and

equipping the whole by the 1st of October, 1856, had been entered into during last winter, and work begun under it. But it is understood that the company became dissatisfied with the contractor, and, at their instance, that the contract was rescinded. A short suspension of the work therefore has become unavoidable, and the time of its completion been delayed. But the energy and resources of the company are an ample pledge that it will be resumed at an early day and carried through.

The construction of this road will afford a common trunk of 110 or 120 miles for the main road to Tampa, leaving about 100 miles more to be undertaken by the same or some other company.

It is ascertained that not less than 1,000,000 acres of State lands are included within the six miles on each side of this road and extension, the one-half of which will become the property of the company constructing them.

There were two railroad companies previously organized, whose charters embraced the line of railroad between Jacksonville and Pensacola, the "*Atlantic and Gulf Central Railroad Company*" for the whole distance, and "*the Pensacola and Georgia Railroad Company*," for a railroad from Pensacola to any point on the southern boundary of the State of Georgia, and therefore may be built to the mouth of St. Mary's river. These companies have agreed as to the portions each undertakes to build, and have given the required notice to the trustees of the internal improvement fund. Engineers are now in the field making necessary examinations and surveys, to enable these companies to locate the line of road east of Tallahassee, and have it ready for letting out contracts by the first of the ensuing year. The counties along this part of the line have subscribed stock to the amount of half a million of dollars, and private subscriptions now reach \$350,000 more. There seems a general disposition, particularly among the planters of the country, to contract for clearing, grading, &c., and receive stock in payment, which will add largely to the private subscription list, as soon as the road is located and estimates prepared. The donation of State lands along this part of the road must amount to 250,000 or 300,000 acres, and forms quite an item to secure the credits necessary for finishing and equipping.

A majority of stock in the Tallahassee railroad company has recently changed hands, and the present stockholders have decided to bring it under the State system by reconstructing and adapting it to steam instead of animal power, and so make it, in fact, an extension or branch road to St.

Mark's from the main road at Tallahassee. This company have purchased their iron, weighing sixty pounds per lineal yard, and have an adequate force at work to widen and re-grade the road-bed, and to prepare cross ties to be ready for track laying, as soon as the first shipment of rails may be expected to arrive, early in September. The road gauge of the old and new tracks being the same, five feet, the business of the road will not be suspended, but rather accelerated than delayed. The early completion of this road will enable the Pensacola and Georgia railroad company to introduce iron for their main road, by way of St. Mark's, so that track laying may begin at Tallahassee as well as at the eastern terminus. Every mile, therefore, as fast as it is built, will be in connexion with the Atlantic or with the Gulf of Mexico. And the citizens of Middle Florida will derive advantages from their portion of the road, without waiting until the line is carried through to the Atlantic.

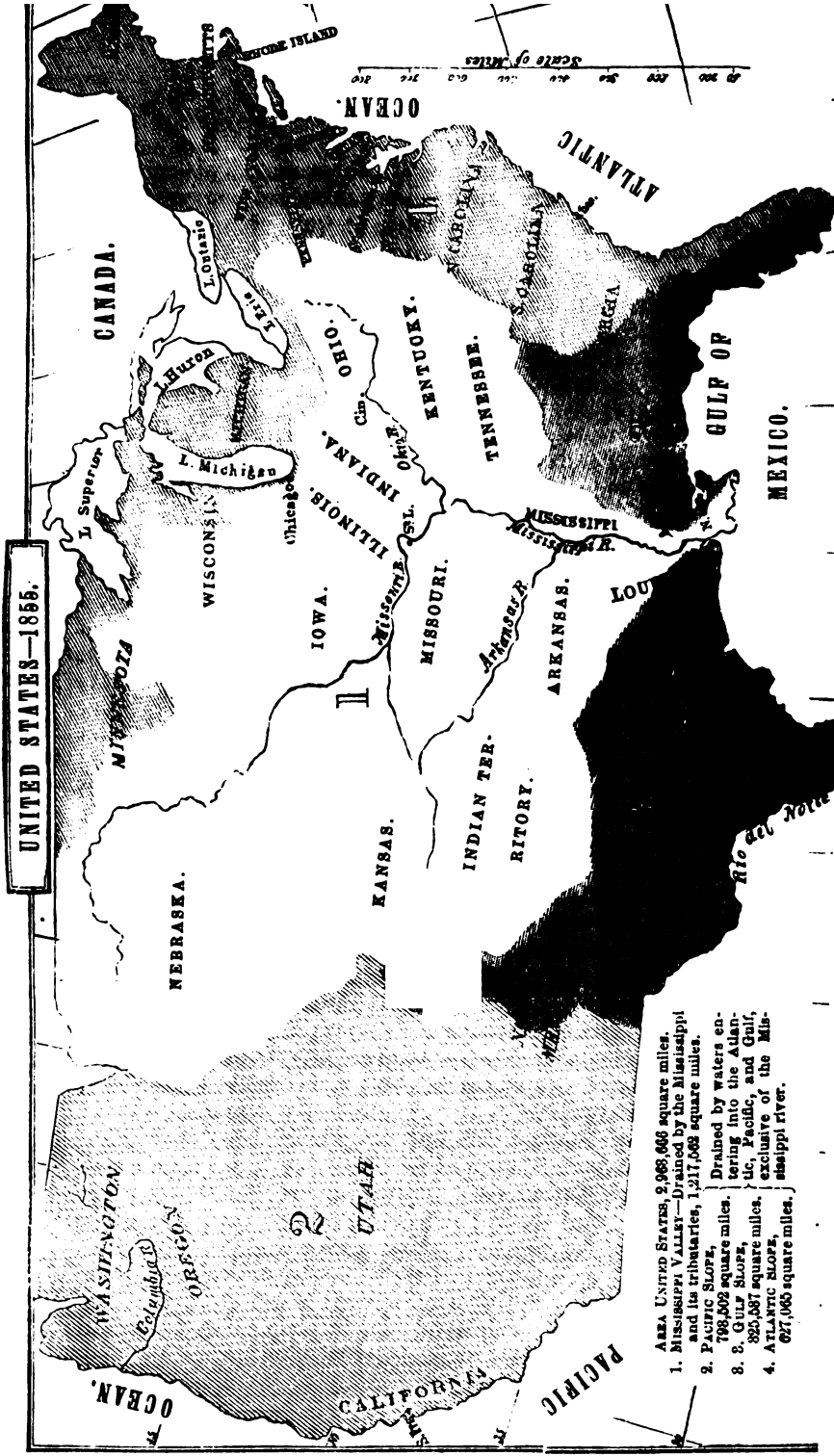
The counties west of Tallahassee have not yet moved, but undoubtedly will when assured that there is the ability put forth east of them to reach the Atlantic. Gadsden county is abundantly able to carry the road across to Apalachicola river, and will be aided in doing so by various interests connected with that river. Jackson, Calhoun, Washington and Walton counties are equally able to continue the line of road across to Choctawhatchee river, and to make an extension from the proper point down to St. Andrew's bay. These portions of road will receive also a full quota of State lands.

There would then remain about 90 miles to reach Pensacola bay on the west side, or to connect with the road from Montgomery, entering Pensacola from the north-east. This part of the road will not be long delayed after that east of it, as it penetrates a country that will yield timber and naval stores, where the State owns a full proportion of the lands, while the interests of Pensacola, and indeed of the general government in their great depot and navy yard on the Gulf, will render its completion almost a military necessity.

But without further attempt to enlarge upon the great results to flow from it, this rapid sketch of the Florida railroad system must be closed. It may answer for future reference as to the plan itself, the leading objects proposed to be attained by it, the means *within* the State applicable to its execution, and the movements now in progress to enter upon the work. Its accomplishment is only a question of time, and will be hastened or delayed just in proportion as capital *out* of the State shall be furnished or withheld.

TALLAHASSEE, August 1, 1855.

B. F. W.



UNITED STATES—1855.

Scale of Miles
 0 100 200 300 400 500 600 700 800 900 1000

- AREA UNITED STATES, 2,968,668 square miles.
1. MISSISSIPPI VALLEY—Drained by the Mississippi and its tributaries, 1,217,668 square miles.
 2. PACIFIC SLOPE, 798,502 square miles.
 3. GULF SLOPE, 825,687 square miles.
 4. ATLANTIC SLOPE, exclusive of the Mississippi river, 627,068 square miles.

RELIGIOUS TOLERATION.

Upon the subject of religious toleration, and against all interference with it, the Hon. Charles Gayarré, of Louisiana, one of the most distinguished citizens of that State, speaks in an address with which he has favored us, but which has not yet been published. This address was prepared to be delivered at the late convention in Philadelphia, had Judge Gayarré been allowed a seat.*

If you compel Louisiana to secede, you will secure for her as glorious a position as I could wish, if I took into consideration her interests only, and not yours in common with hers. If you compel her to secede, you put her at the head of a party which is bound to be triumphant in the end. There will be but one main issue before the people. On our flag will be inscribed these words: "Down with foreign influence; liberty of conscience; no religious test; equality of rights." On yours will be read in letters as awful as those which flamed luridly on the walls of the Babylonian palace: "No liberty of conscience; political disabilities; a religious test; no equality of rights among native born Americans." There needs no prophet fired with divine inspiration, but human wisdom is sufficient, to foretell that, when these two flags meet, the party at whose head you are going to place Louisiana will gain a much more glorious victory than the one which is recorded in history under the name of the "Battle of New Orleans."

Louisiana acknowledges that, at the beginning of the contest, you may have the superiority of numbers on your side, but that is the only superiority she is willing to recognize. She will have enlisted on her side as much talent, patriotism, and energy as you may possess—and she will have more than that, to make your part of the scales kick the beam; she will have justice, right, Christian toleration, open-hearted magnanimity, and political foresight on her side, and, as a necessary consequence, she will have the honest sympathies of the world in her favor—and what is of infinitely more importance, she will have the approbation and the countenance of Him who is never invoked in vain in the struggle of the oppressed against the oppressor, and whose judgment, although on many occasions slow to manifest itself, is sure to be recorded at last in the annals of the human race for the warning of future generations.

* We have often referred to Judge Gayarré's literary labors. They have given him a national reputation. In an elaborate review of his *Spanish Domination in Louisiana*, the *North American Review*, published at Boston, says: "Mr. Gayarré belongs to one of those historic families of Louisiana which send their roots far back to the days of the old Spanish and French occupation." "Of his faithfulness as a historian, we may be content with the testimony of Bancroft, who frequently quotes his book as of authority." In a late number of the *Western Review*, published at St. Louis, Mann Butler, the historian of Kentucky, pays the highest possible compliment to Mr. Gayarré's works.

But suppose that you succeed, will your success be of long duration? In what position will your administration be placed? At home, a million or two millions of active Catholic citizens ostracized by its policy, and therefore animated against it by the most deadly hatred. Around that formidable nucleus will gather all that immense portion of the population which may be opposed to you by a difference of opinion in politics, and from numberless other motives. With a host of bitterer enemies than any administration ever had at home, what will be your position abroad? You will have insulted one hundred and fifty millions of human beings who are in the habit of looking up to you for sympathy, and who are every day gravitating more or less towards emancipation from bondage. You encourage enslaved nations to break their chains and to become free; and at the same time you tell them that, being Catholics, they are incapable of appreciating the blessings of self-government and of freedom! You tell England that she is a fool to trust Catholics, and that she is jeoparding her free institutions by having raised such wretches from the slough of humiliation in which she had kept them so long! You blame her for having halted in the chase of persecution; and yet when she was hallooing her hounds in full pursuit of the game which you wish to start in your turn, you execrated her! Before the great French revolution, which began in 1789, Protestantism in France stood on a precarious footing. Suppose that the French government should return to its old line of policy—that of dragooning Protestants into Catholicism—could your administration venture on any friendly admonition or remonstrance? What right, for instance, would you have to advise the Turkish Sultan to treat his Moslem and Christian subjects with the same favor? What right would you have, at the head of the government, to do what it has always done, and to mediate in behalf of the oppressed? How could you exert a salutary influence with certain other nations, in trying to prevail upon them to put Protestants on a footing of equality with Catholics? Are we not daily interfering at Rome itself in favor of our Protestant citizens? With what good grace could you insist on the Pope granting to Americans the privilege of having a temple in the Eternal City, and to worship God as they please? Is it not worse for you to say to an American—You shall never fill any office of trust or profit in your own country because you are a Catholic, than for the Pope to say to a foreigner: You shall not build a Protestant temple in my dominions? If your administration should proclaim that all the American Catho-

lics, citizens by birth, are to be excluded from office as *dangerous*, has not every other government on the face of the earth as strong a right to exclude foreign Protestants from its territory? What would you say if Austria was to declare to-morrow that none but Americans who are Catholics are permitted to travel through her territories? How could you remonstrate? If you have the right to ostracize the very natives of your soil, on the ground that being Catholics they are dangerous to your institutions, Austria would have a much stronger right to ostracize American Protestants on the same plea—that they are *dangerous* to her peculiar form of government. You judge for yourselves. She also would judge for herself, just as unmindful as you are of any other consideration than that of her fancied security or danger.

It is our national policy to claim a sort of protectorate over Mexico, and over all those republics which have sprung up in South America; this we claim as being their elder sister. You wish your influence to predominate in this continent over that of any European power. Do you think that it will further your views to proclaim from the White House and from the Capitol that all those nations are composed of imbecile wretches, unworthy of any office of trust or profit? Do you not think that you would put, by so doing, a double-edged weapon in the hands of your powerful and sleepless adversaries, England and France? A very wise and a fine thing it is, indeed, for those who desire to annex Cuba, to declare to those very beings whom they are goading into rebellion against the government of Spain, that, when they become Americans, they shall be held unworthy of any office of trust or profit! But it is needless to give further illustrations. It is self-evident that our government would become powerless, at home and abroad, if any administration got into power on the platform which is sought to be established. Say what you please, disguise it as you like, if you retain in the constitution of the order the obnoxious clauses which I denounce to you as pregnant with so much mischief, and if you become the government, the cry will be that the government interferes with the right of conscience; it will be the truth, and the prestige of our republic will be lost throughout the world. On the day when the wing of every wind shall carry to the most distant regions of the earth the news that one of the principles of this government is the proscription of Catholics, a howl of despair will be heard from the oppressed in every country. They will abandon forever the hope of our interfering in their favor, even through the exertion of moral influence, because they will feel that if we

have the right to oppress our Catholic brethren on the ground that they are dangerous, all other governments may use the same arguments to justify their tyrannical acts.

The reasons which you give in support of your hostile position against Catholicism are the very same which, centuries ago, were used to justify the persecution of Christianity itself, so that you cannot even claim the merit of invention. You are plagiarists. If the Emperor Julian, if Theodoric the Goth, could rise from the tomb, they would complain of your stealing their thunder. But if you are disposed to borrow the logic of that long train of Cæsars who have had to answer for the blood of so many martyrs, why do you not imitate its application? Amphitheatres and arenas may still be constructed; lions and tigers may still be found to tear human limbs; men and women, the aged and the young, are still ready to die rather than abjure their God; and if the old Roman populace may be wanted in vain to shout with joy at the exhilarating scene of torture, methinks that another race of beings might be seen rising from the bowels of the earth to witness an exhibition so gratifying to their nature, and so worthy of their character.

POPULATION OF SOUTHERN STATES IN 1850.

States.	Foreign.	Native.	R. Cath.
1 Alabama.....	7,498	426,514	5,200
2 Arkansas.....	1,468	162,189	1,600
3 Florida.....	2,740	47,203	1,850
4 Georgia.....	6,452	521,572	4,250
5 Kentucky.....	31,401	761,413	24,240
6 Louisiana.....	67,308	255,491	37,780
7 Maryland.....	51,011	417,943	37,100
8 Mississippi.....	4,782	295,718	9,250
9 Missouri.....	76,570	592,004	33,950
10 North Carolina.....	2,565	553,028	1,400
11 South Carolina.....	8,508	274,563	6,030
12 Tennessee.....	5,638	756,836	1,400
13 Texas.....	17,620	154,034	6,760
14 Virginia.....	22,953	884,800	7,930
Total.....	306,514	5,993,308	172,740

Whilst upon the subject of Catholic and Protestant, native and foreigner, we will append some extracts from a paper prepared a short time ago by Louis Schade, of Washington. We have not had time to examine his argument, which is carried out with great labor and minuteness, but will allow him to speak for himself.

The United States would have in 1850—

		Total white & free colored population.
If without immigration since 1790.....	7,355,423	} 7,555,423
Addition for Louisiana, Florida, &c.....	200,000	
If without immigration since 1800.....	8,755,364	} 8,955,364
Addition for Louisiana, Florida, &c.....	200,000	
If without immigration since 1810.....	10,610,343	} 10,710,343
Addition for Florida, &c.....	100,000	
If without immigration since 1820.....	12,218,484	} 12,318,484
Addition for Florida, &c.....	100,000	
If without immigration since 1830.....	14,280,726	} 14,330,726
Addition for New Mexico and California.....	50,000	
If without immigration since 1840.....	16,721,674	} 16,771,674
Addition for New Mexico and California.....	50,000	
They had actually, however.....	19,987,573	

This will be to many an astonishing result, but the author is well assured of the correctness of his statement. There may be a difference of some hundreds or thousands, but the millions cannot be altered. And in order to show how well the above estimates correspond with the increase of other countries, and to remove any doubt of their correctness, the following table has been compiled :

Increase of various European nations since the last decennium of the 18th century.

England and Wales in 1790.....	8,675,000	} Increase = 2.06
" " 1851.....	17,922,768	
Austria 1792.....	23,500,000	} " 1.55
" 1851.....	36,514,466	
France 1789.....	26,000,000	} " 1.37
" 1851.....	35,783,170	
Prussia 1797.....	8,660,000	} " 1.88
" 1849.....	16,331,187	
Spain 1797.....	10,351,075	} " 1.33
" 1849.....	14,216,219	
Sweden 1790.....	2,150,493	} " 1.54
" 1849.....	3,316,535	
Sardinia (Island) 1790.....	450,990	} " 1.19
" 1848.....	547,948	
United States* 1790.....	3,231,930	} " 2.33
Without immigration since 1790 1850.....	7,555,423	

This table clearly proves the above estimate of the population of the United States, without immigration since 1790, to be not only a correct one, but even exhibiting a higher increase than any other country. England, the highest among them all, is still 27 on the hundred behind the United States.

The immigrants and their descendants number in 1850, since 1790—	12,432,150
" " " 1800—	11,032,100
" " " 1810—	9,277,230
" " " 1820—	8,669,089
" " " 1830—	5,656,847
" " " 1840—	3,265,899

* White and free colored.

To speculate on these astounding results is not the object of the author, and he leaves this to all those who feel an interest in these statistics, as he is convinced that in the present political struggle his statements will be regarded and appreciated by all parties. His point of view is not so much a political as a scientific one, and, therefore, he hopes that, by all statisticians, these calculations will be honored with a thorough examination.

MANUFACTURES, MINING, AND INTERNAL IMPROVEMENTS.

SOUTHWESTERN RAILROAD PROGRESS.

Colonel Campbell, President of the New Orleans and Great Northern Railroad Company, furnishes some interesting material in regard to the progress of southwestern roads. We regret not to have received the report of the Opelousas and Texas Railroad Company, so as to add its results.

By reference to the documents already referred to, which accompany this report, it will be perceived that the receipts of the company, from its organization to the present time, have been \$4,694,010 33, and its expenditures \$3,046,829 35, leaving a balance of \$1,647,180 98 on hand, or \$1,625,000 in bonds and \$22,180 98 in cash. The receipts of the year ending April 3d added to the cash on hand at the beginning of the year, amount to \$2,957,755 40, and the expenditures to \$310,574 42. The indebtedness of the company is \$695,991 44, all in promissory notes, of which \$152,562 65 matures between this date and December next, and the balance, \$543,428 79, after that date. The active assets of the company, or such as may be converted into cash, amount, as per the statement exhibited, to \$1,797,180 98, which, after deducting the entire liabilities of the company, leaves a surplus of upwards of \$1,100,000 on hand. To this sum upwards of \$1,000,000 might with propriety be added for county and individual subscriptions in Mississippi, already made, and the internal improvement lands donated to the company by that State, showing a clear balance of assets, over and above the liabilities of the company, of more than two millions.

The board of directors have acted during the last year with a constant desire to retrench the expenses of the company, and to limit expenditures to our available means. Had it not been for the stringency of the times, the road might have been completed to Canton by the commencement of next year. A temporary suspension of portions of the work was dictated by every consideration of sound policy. We have continued

to press forward the work at those points which, when finished, will afford the greatest advantage to local interests, and secure additional facilities for hastening the completion of the whole line. Our principal contractors are largely interested in the success of the enterprise, and, appreciating the necessity and wisdom of our policy, have evinced a most laudable alacrity in promoting the wishes of the directors. The impossibility of selling bonds in large amounts, and the high price of money on loan, together with the necessity of providing machinery and preserving the credit of our floating debt, has cramped our operations and been the source of much labor and anxiety. We have the satisfaction of stating that, under all our difficulties, the credit of the company has been fully protected. Through three years' operations, under an expenditure of more than three millions of dollars, and with the numerous transactions in money essential to the management of our business, the company has never been dishonored by protest. No money has been expended in permanent depots or embellishments. Our constant desire is, the extension of the road. That portion of the road included in Louisiana, in a practical point of view, may be regarded as finished. The income is now more than is necessary to defray all costs, and will continue to increase. An extension of twenty miles, which may be effected by November, will double the receipts and add but little to the expense. Negotiations are in progress to put on a daily line of coaches from Jackson to the State line, and to carry the United States mail and passengers daily between New Orleans and Jackson. When the rails are laid on the first twenty-four miles north of the State line, which may be easily accomplished by the first of January, only seventy miles of staging will remain, and that over an excellent road. Passengers and the mail may be carried to Jackson in 18 hours, and to Vicksburg in 20 hours.

The board of directors are fully impressed with the importance of immediate attention to the interests of the company of Mississippi. Up to this time it has not been in the power of the president to visit that section in person. Of the last year, six months of his time were consumed in the foreign mission; and since his return, duties at the legislature, (growing out of engagements made previously to his connexion with the board,) together with many local details in the management of the business of the company in New Orleans, have necessarily confined his personal attention to Louisiana. Nearly four-fifths of our road is within the State of Mississippi, and passes through central counties remote from navi-

gable waters. The amount of benefit which these large and valuable districts will derive from the cheap and quick transit of passengers and produce, when the road is completed, will exceed the most sanguine anticipations. The interests of Louisiana and Mississippi are identical. We have a common destiny to achieve, and should pursue it in brotherhood. The territory of these States may be subdivided for local convenience, but the general interests of the people are indivisible. The lines marked out for internal improvement upon the chart of the two States before you, constitute a diagram from which our mutual dependance may be demonstrated with mathematical precision.

A brief account of the present condition and prospects of those railroads in Mississippi, Alabama, and Kentucky, which will form the connecting links of our enterprise with the great railway system of the United States, east of the Mississippi, will be perhaps both proper and instructive.

MISSISSIPPI CENTRAL RAILROAD.—This important work of internal improvement unites with our road at Canton, Miss., and runs by a line at five degrees east of north through Holly Springs to the Tennessee State line, and intersects the Memphis and Charleston railroad, a short distance east of La Grange, at a point about fifty miles distant from Memphis. From thence it is continued in the same direction to Jackson, Tenn., where it unites with the Mobile and Ohio railroad. From Canton to the Tennessee State line is 184 miles, and from thence to Jackson, Tenn., about 52 miles, making an aggregate of 236 miles along the precise location we would have selected for our road to the mouth of the Ohio river. By a careful examination of the very able report of M. Butt Hewson, esq., civil engineer, we ascertain that the mechanical efficiency of this road may be regarded as equal to our own, the curves and graduations being very easy. I offer the following extract from the report referred to as containing valuable facts and sound philosophical reflections :

Extracts from the report of M. Butt Hewson, esq.

“From the progress making in the construction of the Mobile and Ohio roads in the States of Tennessee and Kentucky, there is no reason to doubt its completion to the Ohio river at a period anterior to the anticipated completion of yours, thus opening a direct railroad communication over the Illinois Central road with the city of St. Louis and the northern lakes, on the shortest possible line that can be obtained east of the Mississippi, intersecting in its course the contemplated

roads from Memphis to Louisville, and from Nashville to the Mississippi river. Near the State line of Tennessee your road intersects the Memphis and Charleston road, passing eastwardly from the city of Memphis to the city of Charleston.

“Seventy (eighty-eight) miles of the New Orleans, Jackson, and Great Northern railroad, from the city of New Orleans north are now in active operation, and will be extended to the southern line of this State in all of next month. There is at present no cause to doubt its completion to the town of Canton before the expiration of the year 1856. Thus you have almost certain assurance that by the expiration of the time when your road is to be completed, there will be a continuous line of railway of the same gauge extending from the extreme north to the city of New Orleans, traversing a country possessing the elements of an unlimited agricultural wealth, and offering facilities for the speedy interchange of the productions of eleven degrees of latitude.

“When these important railroad connexions are duly considered, with the amount of freight and passenger traffic that may flow from them; when you reflect upon the direct north and south line of the road; its remoteness from the competing influence of the other railways and of the Mississippi river; the character of the country traversed by it; the quantity and value of the productions of the district tributary to it; the population within the range of its influence; the yearly amount of travel passing from north to south; can it be doubted that this long line of railway will not almost equal in its advantages and importance the Mississippi river itself, or that the certainty and amount of the income of your road, when completed, will not equal, if it does not exceed, that of any other road now constructing or in contemplation in any of the southwestern States.

“The local traffic of a railroad is of the first importance, and none should be undertaken where the local passenger and freight traffic does not promise an income equal to the expense of operating it when completed. The Central Road possesses this assurance in an eminent degree.

“In the district of country limited by its line of influence is contained more than one fourth of the whole white and black population of the State, and there was grown more than one fourth of the cotton and corn crop produced in 1849, in the whole State, according to the United States census of 1850. In addition to this, there is produced large quantities of agricultural commodities, now almost valueless to the producer on account of the expense of transportation to market, that would become valuable articles of export upon the com-

pletion of the road. There are also extensive tracts of unimproved land, equal in quality of soil to any in the cotton growing region, that need but a cheap and certain means of transporting the productions of the country to market, to insure their cultivation and a very large addition to the quantity and value of our exports, thus securing to your road, an amount of local traffic far exceeding any estimate that may have been made, based upon present population and production."

In connection with the same subject, we beg leave to submit the views of W. Goodman, esq., president of the Mississippi Central Railroad Company, a gentleman equally respected for his high personal character as for intelligence and public spirit.

Extract from the report of W. Goodman, esq.

* * * * *

This road is a central link in the great highway from New Orleans on the Gulf of Mexico, by way of Cairo, on the Ohio, to Chicago, on Lake Michigan. The New Orleans and Great Northern Railroad is already under work for eighty-seven miles, and in a few weeks will doubtless be let out to the connexion with this road. In Tennessee the Bolivar and Lorange Company will in all likelihood let out their roadbed immediately. On these considerations, and on that of the certain completion of the Mobile and Ohio Railroad from Jackson, Tennessee, to Cairo, in Illinois, within a short time this road will, doubtless, on the day of its completion, furnish a through connexion between New Orleans and Chicago. How then, is the through business on this road when connected with Cairo on the one end, and New Orleans on the other, to be estimated? Through the agency of the Mississippi river, the Oupelousas and Western Railroad and this extension of her Jackson road, New Orleans must always continue as the great cotton market of the world, the chief shipping point on the Gulf of Mexico. That the Mobile and Ohio Railroad will absorb all the trade of New Orleans which concentrates at the mouth of the Ohio, is absurd, (if for no other reason,) on the ground that the tonnage will far exceed the capacity of the road. Wherever the great bulk of trade goes, the great bulk of travel will follow, and as an inference from this, the vast majority of the travel which shall concentrate at Cairo from the Ohio, the Mississippi, or the Chicago railroad, will take this road as debouching into New Orleans. This is a safe assumption in considering the probable business of the road. Of the freights brought over the Mobile and

Ohio Railroad to the junction of this road it is difficult to say how much will go to Mobile and how much to New Orleans; but the advantage of breaking bulk on the one hand, and the advantage of a brisker market on the other, will result in the distribution of at least one-half those freights over this road. With all the travel and half the freights concentrated at Cairo, as the through business of this road, it is very difficult to fix any limit to its amount, short of the capabilities of the road.

The earthwork of the entire line of the Mississippi Central railroad is under contract, and will be probably completed within eighteen months. Iron, for thirty miles of the road, has been contracted for, and will be laid down during the present season.

THE MOBILE AND OHIO RAILROAD.—To those who feel interested in the cause of internal improvement, a most agreeable and instructive lesson may be learned by perusing the printed documents of the Mobile and Ohio Railroad Company, from their first to their last report—"The Seventh Annual Report." There is something grand in the idea of a city, with the comparatively limited wealth and population of Mobile, embarking so boldly in this great enterprise for connecting the Gulf of Mexico with the Ohio and the vast regions beyond it; but when we regard the energy, harmonious action, and unflinching perseverance which they have always displayed, and frequently under trying circumstances, we cannot but award the good people of our sister city our sincere congratulations for the bright prospects in store for them, and thanks for the example they present for our imitation.

The very lucid report of John Childe, esq., chief engineer and general agent of the company, shows that at least three-fourths of the road between Mobile and the mouth of the Ohio is graded, and ready to receive the iron track. As before stated, we reach this road by the Mississippi Central, at Jackson, Tennessee, from whence we pass over the Mobile road to Cairo by the main line, and by a branch at Obion to Paducah, a distance of fifty-nine miles. The whole work is under contract through Tennessee to Kentucky, except twenty-five miles on the branch to Cairo; and we may safely state that Mobile, within two years, will be in daily communication, by railroad, with the Ohio river. Our main line, after leaving Canton, intersects the Mobile and Ohio railroad nine miles from Aberdeen, at a point 250 miles from Mobile and 320 from New Orleans; and by this union we are brought in connexion with all the country through which the Mobile

road traverses, until it is intersected by the Mississippi Central at Jackson, Tennessee.

Leaving Canton, we intersect the Memphis and Charleston railroad at three points, to wit: first, by the Mississippi Central, near Lagrange; next, by our main branch, and the Mobile and the Ohio railroad, near Jacinto; and finally, at the terminus of our own railroad at Chickasaw. From thence through the Tennessee valley, *via* Loudon, Knoxville, Abingdon, Christiansburg, &c., to Washington city. This entire line is either under contract or finished.

We have recently received the satisfactory intelligence that the Vicksburg, Shreveport, and Texas railroad has been placed under contract from Vicksburg to the Texas line, a distance of 207 miles. When this important railroad is completed, the most remote part of western Louisiana may be reached from New Orleans within eighteen hours.

By the time our railroad is completed to Jackson, it is reasonable to believe that we will be placed in direct communication with the whole railroad system of the United States east of the Mississippi. From that day our stock will become a profitable investment. The State of Louisiana and the city of New Orleans will be relieved from taxation on account of their subscription—property will rise in value, and trade and population be increased in the same ratio as has been experienced in other cities on the completion of similar enterprises.

* * * * *

When our connexion is completed with the railroads above described, we may reach Chicago by our northern branch, travelling at the rate of twenty-five miles per hour, in thirty-six hours, Washington city in forty-eight hours, St. Louis, in thirty hours, Cincinnati, in thirty-two hours, Nashville, in twenty-two hours, and all intermediate points in the same ratio of reduction. This statement alone must convey to any reflecting mind the vast importance of our enterprise; and, when it is remembered, that all the intercourse and traffic of the vast system of roads, which tends to New Orleans, must pass over ours as a main trunk, its value as an investment may readily be appreciated.

ON WHAT ROUTE ARE WE TO HAVE THE PACIFIC RAILROAD?

The Hon. Jefferson Davis, Secretary of War, after a thorough examination of all the surveys from ocean to ocean authorized by the late acts of Congress, pronounces in favor of the southern, or Texas route, in a report which is drawn up with all the ability characterizing that eminent statesman and honored citizen. We have this report before us, with most of the maps and voluminous documents that accompany it, having received the sheets as they came from the

press in advance of their regular publication. The whole will make up a magnificent collection of material, honorable to all of the gentlemen engaged and to the nation which authorized their labors. Colonel Davis has distinguished himself here as much as he did in Mexico, which is the highest meed of praise that could be awarded him. The following is the list of papers which accompany the report :

List of documents accompanying the report of the Secretary of War.

1. Examination by Captain A. A. Humphreys, Topographical Engineers, of the reports of the explorations to determine the most practicable and economical route for a railroad from the Mississippi river to the Pacific ocean.
2. Memoranda by Captain George B. McClellan, Corps of Engineers, upon some practical points connected with the construction and working of railways.
3. Letter of Major General Jesup, Quartermaster General U. S. A., upon the cost of transporting troops and supplies to California, Oregon, New Mexico, &c.
4. Report of Governor I. I. Stevens upon the route near the 49th parallel.
5. Reports of Lieutenant E. G. Beckwith, 3d regiment of artillery, upon the routes near the 41st and 38th parallels.
6. Report of Lieutenant A. W. Whipple, Topographical Engineers, upon the route near the 35th parallel.
7. Report of Captain John Pope, Topographical Engineers, upon that portion of the route near the 32d parallel from Preston to the Rio Grande.
8. Report of Lieutenant John G. Parke, Topographical Engineers, upon that portion of the route near the 32d parallel from the Rio Grande to the Gila.
9. Extract from the report of Major W. H. Emory, Topographical Engineers, of a military reconnaissance made in 1846 and 1847.
10. Report of Lieutenant R. S. Williamson, Topographical Engineers, of explorations in California in connexion with the routes near the 35th and 32d parallels.

These papers we intend from time to time to examine through the pages of the Review, confining ourself, for the present, to an extract from Colonel Davis' summary, in which, with great ability, he presents the merits of the several routes.

To aid in a comparison of the several routes, reference is made to a table prepared by Captain A. A. Humphreys, and hereto appended.

With regard to the estimates of cost, although believed to be as accurate as can be made under present circumstances, they are to be considered as intended not so much to show the absolute sums of money which would build the several roads, as to represent the relative quantities of materials and labor required for the purpose. If now tested in the actual construction of any one of the roads, they will doubtless be found to contain many errors ; but as the same data have been assumed on all the routes, the same amount of error will probably be found in each, and the actual expense will thus preserve the same proportion.

With regard to the equated lengths of the several roads, or, in other words, the influence of ascents and descents upon the expense of working, it is proper to direct attention to the remarks of the engineer, appended to the tables, in which he states that on all the routes the amount reported will be subject to increase when the minor undulations of the ground shall be measured ; and this increase will be the greatest on those routes and in those portions where the features of the

country are less regular, that is, where there are most of such minor undulations to be measured. The equated distances also affect the cost of working a road only under certain circumstances, which may or may not exist on the contemplated route.

A comparison of the results stated above, and of those exhibited in the tables referred to, conclusively shows that the route of the 32d parallel is, of those surveyed, "the most practicable and economical route for a railroad from the Mississippi river to the Pacific ocean."

This is the shortest route; and not only is its estimated cost less by a third than that of any other of the lines, but the character of the work required is such that it could be executed in a vastly shorter period. It is obvious that a road on any of these routes, with the exception, perhaps, of the 47th parallel, must be built continuously from the two extremities, and an obstacle that arrests its progress at any point defers the commencement of all the work in advance. The tunnels and much of the other work on the more northerly routes in the most desolate regions are such as could not be commenced until a road was constructed up to those points, and would then require a long period for their completion.

On the southernmost route, on the contrary, the progress of the work will be regulated chiefly by the speed with which cross-ties and rails can be delivered and laid, the nature of the country being such that throughout the whole line the road-bed can easily be prepared in advance of the superstructure. The few difficult points, such as the Pass of the Guadalupe and Hueco mountains, and the passes between the Rio Grande and Gila, would delay the work but an inconsiderable period.

This peculiarity of the ground presents another advantage in the fact that temporary tracks could be laid upon the natural surface of the earth to almost any extent, to serve for the transportation of materials and supplies.

The climate on this route is such as to cause less interruption to the work than on any other route.

Not only is this the shortest and least costly route to the Pacific, but it is the shortest and cheapest route to San Francisco, the greatest commercial city on our western coast; while the aggregate length of railroad lines connecting it at its eastern terminus with the Atlantic and Gulf seaports is less than the aggregate connexion with any other route, as will be seen by reference to the appended table B.

With regard to the circumstances which affect the cost of working and maintaining the road, they are more favorable

than on any other route. In this dry climate the decay of cross-ties and other timber would be very slow, and the absence of severe frost would have a most important influence upon the permanence of the road-bed, and heavier grades could be adopted than in a climate where ice and snow prevail.

The snows on all the other routes, except that of the 35th parallel, could not fail at certain seasons to suspend the working of the road, for on all, such snows are known to have fallen as would interpose an effectual barrier to the passage of trains. Such an occurrence in this desolate region would be attended with more serious consequences than in inhabited districts.

In only one important respect is this route supposed to be less favorable than some of the others, and that is in the supply of fuel. The difference, however, in favor of the others is not great, unless the existence of coal at certain points along those routes where it is indicated should be verified by further examination. The cost of fuel is about one-fifth of the whole expense of maintaining and working a railroad.

The grades of the several routes, and other similar information, will be found upon the sheets of profiles compiled in the office.

B.—Distances of the eastern termini of the several Pacific railroad routes to the Mississippi river.

	Rock Island.	St. Louis.	Memphis.	Gaines.	Boston.	New York.	Charleston.	New Orleans.	Aggregate.
1. St. Paul to					1316	1190	1193	1198	4897
2. Council Bluffs to	267				1374	1252	1195	1075	5163
3. Westport, mouth of Kansas, to		245			1415	1220	1045	875	4800
4. Fort Smith, Arkansas, to			270		1540	1345	960	655	4776
5. Fulton to				150	1530	1335	950	402	4367

NOTES TO PRECEDING TABLE.

* These are the estimates of the office, those of Gov. Stevens having been brought to the same standard of increased cost as the other routes, and his equipment reduced to that of the other routes. His estimates were \$117,121,000 and \$7,080,000.

† Supposing the route to be a straight line, with uniform descent from the Un-kuk-oo-ap mountains (near Sevier river) to the entrance of the Tah-ee-chay-pah Pass, the most favorable supposition.

‡ This estimate for the route near the 35th parallel is thought to be largely in excess.

§ These sums do not include the areas of cultivable soil as far west as the Cascade and Sierra Nevada mountains.

¶ The sum of the minor undulations (not included in the sum of ascents and descents here given) will probably be greater for the route of the 47th parallel than for the other routes; that for the route near the 32d parallel will probably be the least of all.

With the amount of work estimated for the roads in this report, the equated lengths corresponding to the sum of ascents and descents has but little practical value. With a full equipment and heavy freight business, the sum of ascents and descents becomes important. A comparison of the degree of curvature of the routes cannot be made.

The sum of the ascents and descents given for the various routes, does not take into consideration those minor undulations which sometimes largely increase the aggregate.

I think it probable that when detailed surveys are made, it will be found that this sum for the route near the parallel will be more increased than those for the other routes, and that the sum for the route near the 32d parallel will be less increased than the others.

The equated lengths corresponding to these sums may give erroneous impressions. If the loads to be habitually carried over the roads are within the power of the engines over the greatest grades proposed, then the sums of ascents really have little meaning or value. The wear and tear of rail and machinery, and consumption of fuel, would be somewhat greater on the road having the largest sum; but the difference would not be worth taking into account, unless there was an equality in all other respects between the routes.

If there are some grades so steep as to require the division of the loads habitually carried over other portions, the cost of the extra locomotives, and of working them over those portions, will show the extent of the disadvantage and yearly cost.

So far as any estimate has been made by me of the amount of work to be done on the roads, these sums of ascents and descents have little practical value, since those portions of the routes have been indicated where it may be considered advisable to use steep natural slopes with extra engines, to expedite the completion of the road, and save expensive road-bed preparation. With a full equipment and heavy freight business, the sum of ascents and descents becomes important.

The nature of the surveys does not admit of a comparison of the degree of curvature on the several routes.

JOURNAL OF HOME AND FOREIGN COMMERCE.

SHIPS AND SHIPPING OF THE UNITED STATES.

Rapid as has been the progress of population in this country for the past forty years, the increase in the amount and value of the tonnage employed in the carrying trade has vastly outstripped it. While population has about doubled itself in thirty-four years, our tonnage has quadrupled in that time. In the year 1820 the total tonnage, registered and enrolled, was 1,280,163 tons, and in 1854 it was 4,802,902 tons. The general pacification of Europe in 1815 found us with a tonnage of 1,368,127—of which 854,294 tons were registered, the remainder being enrolled and licensed, representing with tolerable accuracy the proportions of the tonnage engaged in the foreign and coasting trade.

From 1815 till 1822, it appears that the tonnage declined in amount, and it was not until the year 1823 that it again equalled what it had been in 1815. The cause of this decline it is not now our purpose to explore. It was doubtless caused mainly by the ability of the nations of Europe to do for themselves that which, as a neutral power, we had been doing for them on the ocean during the progress of the continental war. From 1824 till 1828, the amount of tonnage gradually increased, until in that year it reached 1,741,391 tons. The next year it decreased nearly half a million tons, and did not attain the point it had been at in 1828 until 1834, since which time it has been steadily increasing. From 1834 to 1844 the increase of tonnage was about sixty per cent., and from 1844 to 1854 it has more than doubled. The following tabular statement will show the progress in this department of our national industry :

Years.	Registered tonnage.	Enrolled tonnage.	Employed in coasting trade.
1815.....	854,294	513,833	435,066
1820.....	919,047	661,118	539,080
1825.....	700,787	722,323	689,273
1830.....	576,675	615,311	516,978
1835.....	885,520	939,118	792,301
1840.....	899,764	1,280,999	1,176,694
1845.....	1,095,172	1,321,829	1,190,696
1850.....	1,585,711	1,949,743	1,755,796
1854.....	2,333,819	2,409,083	2,273,900

AGRICULTURAL AND HORTICULTURAL JOURNAL.

AN ANALYSIS OF THE LEAVES OF THE COMMON YELLOW OR PITCH PINE AND RED OAK.

To the Secretary of Black Oak Agricultural Society:

I beg leave to submit the following report upon the pine and oak leaf litter, furnished me by your society for chemical analysis:

The investigation contemplated a determination of the mineral or incombustible ingredients of these vegetable substances; that is to say, of those compounds that would be yielded either by their incineration, or by their slow decomposition, during the ordinary processes of decay. The analyses performed were confined to the residuum left after the burning of the substances to a complete ash in a platinum muffle.

1. Pine leaves.

These were evidently the produce of the common yellow or pitch pine of the country, sometimes also called the long leaved pine (*pinus palustris*.) The leaves were remarkably clean and perfect, even to the presence of their enclosing stipules. Though atmospherically dry, they were found to contain 8.6 per cent. of water.

The ash obtained was perfectly white, and exhibited to some extent the original size and shape of the leaf, being firm and rigid from the excess of silica present therein. The ash amounted to 1.8 per cent. on the perfectly dry leaves. It retained its dryness on exposure to the air, thereby indicating the presence of only a small proportion of soluble alkaline salts.

The composition of these 1.8 parts of the pine leaf ash, (i. e. of the amount derived from 100 parts of the dry leaves,) was as follows:*

	Pounds.
Carbonate of potash, with some soda	0.1170
Phosphate of lime, with some magnesia.....	0.2610
Carbonate of lime and magnesia, (the latter earth to the former as 1 to 6)	0.3312
Silica	1.0290
Sulphate of potash.....	0.0144
Phosphate of potash, with traces of chlorides.....	0.0060
Loss	0.0412
	<hr/>
	1.8000
	<hr/>

From the foregoing it appears that the ratio of the soluble to the insoluble ingredients of the ash is 0.1374 to 1.7212, or as 1 to 12.

2. Oak leaves.

These were likewise clean and dry, and when gathered must have been perfect with their petioles attached. They belonged to the species of the barrens scrub oak, (*quercus catesbeoi*), to that of the black oak, (*quercus tinctoria*) and in a few instances to the black jack, (*quercus ferruginea*.) When thoroughly deprived of moisture they lost 9.99 per cent., thereby evincing that this kind of leaf litter is slightly more retentive of moisture than that of the pine.

The ash amounted to 2.98 per cent., or to 2.98 pounds on 100 pounds of the perfectly dry leaves.

* Although the analysis was operated upon the usual small quantity of material employed by chemists in these investigations, it will nevertheless be convenient, in this and the following tables, to interpret the weights as referring to pounds and to decimal parts of pounds.

344 ANALYSIS OF LEAVES OF PITCH PINE AND RED OAK.

The color of the ash was nearly that of wood ashes. The form of the leaf wholly disappeared in the process of incineration. The ash remained dry on exposure to the air. The 2.98 parts gave

	Pounds.
Carbonate of potash, with some soda	0.134
Phosphate of lime, with some magnesia.....	0.372
Carbonate of lime and magnesia, (the latter earth to the former as 1 to 6) .	1.954
Silica.....	0.447
Sulphate of potash.....	0.071
Chlorides, with oxides of iron and manganese.....	in traces
	2.980

The ratio of the soluble to the insoluble ingredients in the oak leaf litter is 0.205 to 2.773, or as 1 to 13.

The agreement between the ashes of the pine and of the oak leaves, in regard to soluble and insoluble substances, is striking, while a very remarkable contrast subsists between their contents of carbonate of lime and magnesia, and of silica : the carbonate of lime and magnesia in 100 pounds of oak leaves being six times greater than in the same weight of pine leaf, while the silica of the latter surpasses that of the oak by $2\frac{1}{2}$ times. In all other respects, the differences between the two species of ash may be regarded as inconspicuous.

3. Comparison of the ashes of pine and oak leaf litter with those of Indian corn and cotton wool.

To bring the mineral ingredients of pine and oak leaves into direct comparison with those of the grain of the Indian corn and of the fibre of the long staple, black seeded cotton, it becomes necessary to give the composition of the ash from 100 parts by weight of each of these last named products.

Cotton.—100 of dry cotton wool gave 0.92 of ash, which consisted of—

	Pounds.
Carbonate of potash, with some soda.....	0.4063
Phosphate of lime and magnesia.....	0.2295
Carbonate of lime and magnesia.....	0.1452
Silica.....	0.0380
Sulphate of potash.....	0.0249
Chlorides of potassium and magnesium, sulphate of lime, phosphate of potash, with feeble traces of iron.....	0.0594
Alumina, accidentally present.....	0.0129
	0.9180

The soluble to the insoluble, as 4926 to 4256.

Indian corn.—100 of dry grains of Indian corn gave 0.95 of a fusible, glassy ash, or residuum, which had the following composition :

	Pounds.
Potash, with some soda.....	0.1853
Phosphate of lime and magnesia.....	0.2944
Carbonate of lime and magnesia.....	0.0442
Silica.....	0.3652
Sulphate of potash.....	0.0212
Sulphate of lime and magnesia, with traces of chlorides.....	0.0075
Silica, mechanically present.....	0.0160
Loss.....	0.0156
	0.9494

Soluble to insoluble, as 2140 to 7198, or as 1 to 3 2-5.

Before framing the comparative table, for which we are now prepared, it may be observed that there exist but five ingredients to which we need direct our attention ; the remaining constituents of the substances analyzed being present only in very small proportions, and being nearly alike in quantity in each case. The five ingredients of paramount importance are those first enumerated in the preceding tables.

ANALYSIS OF LEAVES OF PITCH PINE AND AND OAK. 345

1. Comparison of mineral constituents in 100 lbs. cotton and 100 lbs. pine leaves.

	Cotton, lbs.	Pine leaves, lbs.	No. of times the latter is contained in the former.
Carbonate potash, with soda	0.4083	0.1170	1-3
Phosphate lime and magnesia	0.2295	0.2610	1 1-0
Carbonate lime and magnesia	0.1452	0.3312	1 1-10
Silica	0.0380	1.0290	40
Sulphate potash	0.0249	0.0144	1-2

2. Comparison of mineral constituents in 100 lbs. cotton and 100 lbs. oak leaves.

	Cotton, lbs.	Oak leaves, lbs.	No. of times the latter is contained in the former.
Carbonate of potash, with soda	0.4083	0.134	1-3
Phosphate lime and magnesia	0.2295	0.372	1 1-3
Carbonate of lime and magnesia	0.1452	1.954	14
Silica	0.0380	0.447	11 6-10
Sulphate potash	0.0249	0.071	3

3. Comparison of mineral constituents in 100 lbs. Indian corn and 100 lbs. pine leaves.

	Indian corn, pounds.	Pine leaves, pounds.	No. of times the latter is contain'd in the former.
Carbonate potash, with soda	0.1853	1.1170	1-3
Phosphate lime and magnesia	0.2944	0.2610	1 1-9
Carbonate lime and magnesia	0.0442	0.3312	7 1-2
Silica	0.3652	1.0290	3
Sulphate potash	0.0212	0.0144	3-4

4. Comparison of mineral constituents in 100 lbs. Indian corn and 100 lbs. oak leaves.

	Indian corn, pounds.	Oak leaves, pounds.	No. of times the latter is contain'd in the former.
Potash	0.1853	0.134	1-2
Phosphate lime and magnesia	0.2944	0.372	1 1-4
Carbonate lime and magnesia	0.0442	1.954	45
Silica	0.3652	0.447	1 1-5
Sulphate potash	0.0212	0.071	3

The foregoing tables show that 100 pounds of pine or oak leaves contain but one-third the quantity of the highly important alkaline carbonate requisite for 100 pounds either of cotton or corn; but as this ingredient is afforded to some extent by all clayey soils, through the gradual decomposition of the feldspar and mica they contain, it seems probable that this amount of leaf litter would be adequate to maintain the soil in fertility for both these crops.*

One hundred pounds (or rather 110 pounds, making allowance for hygrometric moisture in the atmospherically dry leaf) of either of these kinds of leaf litter, will fully supply the phosphates indispensable for the same weight of cotton and corn; while of the less important carbonates of lime and magnesia, it will (except in the case of the pine leaf for cotton) generally give a large surplus. In the 100 pounds of pine leaves there is three times too much of organized silica for the corn, and forty for that of the cotton. In the 100 pounds of oak leaves there is only a sufficiency of the same element for the corn, but eleven times more than is needed for the cotton. Of sulphate of potash and the chlorides, the 100 pounds of leaves of either kind will supply all that is demanded by either crop in like quantity.

The value of leaf litter would doubtless be much enhanced as a manure if it could be collected early in the season after the falling of the leaves, before incipient decomposition had commenced; since it is probable that much soluble saline matter escapes during the first stages of decay. And in conclusion, it may not be superfluous to add that a great gain would result to the planter if he could cause the litter to be thoroughly imbued with the urine and droppings of cattle, and subsequently composted before applying it to his fields.†

TABLE

Showing (in pounds and decimals of pounds) the mineral constituents in 60 pounds Indian corn, in 60 pounds pine leaves, and in 60 pounds oak leaves.

	Corn, pounds.	Pine leaves, pounds.	Oak leaves, pounds.
Potash.....	0.1111	0.0596	0.800
Phosphate lime and magnesia.....	0.1766	0.1566	0.223
Carbonate lime and magnesia.....	0.0265	0.1987	1.172
Silica.....	0.2192	0.5647	0.267
Sulphate potash.....	0.0127	0.0082	0.042

CHARLES UPHAM SHEPARD.

CHARLESTON, March 26, 1855.

CULTIVATION OF SQUASHES AND PUMPKINS.

In a communication received at the Patent Office from Dr. Harris we have some very interesting details respecting this favorite vegetable production. There is much confusion in regard to both the names and qualities of the "Cucurbita" of botanists, and few persons are sufficiently well acquainted with the tribe generally to be able to make a choice for field or table. It is assumed that some of the finest varieties of the squash or pumpkin originated in the central and eastern parts of this continent. The first settlers found them in the gardens and fields of the Indians; and Champlain saw the bell-shaped squash or pumpkin of New England as far north as Saco in 1605 and 1606. Another variety, cultivated by the Iroquois, still bears their name in France. They are also found in North Carolina and in the West Indies. They are indigenous to Brazil; and

* Still it might be useful to add, along with this quantity, all the wood-ashes at command upon the plantation. These usually contain about 15 per cent. carbonate potash.

† As the resolution of your society, under which the foregoing investigation was undertaken, required me to state the quantities of pine and oak leaf demanded to supply the mineral ingredients in one bushel of corn of 60 pounds weight, the following additional table is supplied, giving those ingredients in 60 pounds of corn, and in a like weight of dry pine and oak leaves.

even Patagonia has added one to the common stock. Roger Williams states that the Indians of Massachusetts called the varieties found there "Askutasquash," and that our term "squashes" is derived therefrom. The tribe described by him and others, as cultivated in New England as "summer squashes," forms a part of the group called by Linnæus "*Cucurbita melopepo*." In East Florida there is a wild squash vine, bearing a small yellow fruit about the form and size of an orange, which climbs to the tops of the trees. Mr. Nuttall says that the "warted" squash (*C. verrucosa*) was cultivated by the Indians of the Missouri. The "egg" squash (*C. ovifera*) Linnæus supposes to be a native of Astracan, in Tartary; yet, on the other hand, there is reason for believing that it may have been introduced with Indian corn from America. But, however strong the evidence in favor of an American origin for some of the squashes, it cannot be doubted that the ancients were acquainted with them. Euthydemus, a Greek writer, calls the squash the "cucumber of the Indies," because the seed was brought from the east; and Pliny particularly describes two kinds: one which climbs to the tops of walls and houses, while the other keeps the level of the ground. Any form was given to the fruit by enclosing it in willow baskets as soon as the flowers fell off. Pliny also speaks of a wild variety which the Greeks called "somphos." Galen and Dioscorides speak of them in reference to their healthful or medicinal qualities. The true "mammoth" pumpkin, the "Potiron" of the French, (*Cucurbita maxima*) is among the most attractive. Its form is an oblate spheroid, depressed at the blossom and stem ends. It grows frequently to an immense size, weighing as much as sixty pounds and being two feet in diameter. It varies much in color, form, and size, and the original characteristics are sometimes lost in the changes of its varieties. Dr. Harris seems to regard the "Valparaiso" or Potiron group as more tender than the pumpkin or "Pepo" group, and more subject to the attacks of worms at the roots. The "custard" squash or pumpkin has a fine light yellow flesh, much esteemed in making pies and puddings. It has a hard, pale, buff-colored shell, not at all woody. The "summer" squashes differ from the above in having a hard, woody shell, with a slimy fibrous pulp, which, when dry, becomes a mere stringy and spongy mass. These fruits can only be eaten while tender and succulent, and never in a ripe state. On account of their woody shells they are sometimes mistaken for gourds, which, both as to flowers and seeds, differ materially from them. Among the most agreeable varieties are the "orange" or "apple" squash, (*C. aurantiaca*) For table use they are superior to the "scalloped" or "warted" squashes. Cultivation has improved the qualities of all these productions, and so increased the varieties that it is now almost impossible for botanists "to determine which of the known kinds are typical species and which are mere varieties."

MAIZE, OR INDIAN CORN—VARIETIES—CULTIVATION AND PRODUCTION.*

It is needless here to discuss the question of the eastern or western origin of this most nutritious and invaluable grain. That has already been satisfactorily done, and the evidence justifies us in placing it among many other similar contributions for which the old world is indebted to the new.

It is certain that the first Europeans that set foot in Mississippi found it generally cultivated by the Indian tribes.

In the progress of De Soto's expedition, it was noticed as "of such luxuriant growth as to produce three or four ears to the stalk."

With us, as an article of food, it has become by far the most important that our soil produces.

The varieties which seem best adapted to our climate are the Tuscarora, the Gourd Seed, and the White and Yellow Flint.

Other varieties thrive well, but being less generally applicable to the varied uses of the grain, are not established as a common production.

Among these are the White Flour corn, the Sweet Rareripec, or Mandan, the small Flint "*pop-corn*," and some fancy kinds, such as the Golden Grain, &c., which are occasionally introduced.

All these kinds are valued for particular qualities, which are combined in none, and are more or less in favor of different planters, according to the uses or

* From Waller's Agriculture and Geology of Mississippi. Philadelphia: Lippincott & Co., 1855.

purposes for which they are designed, or as they accord with the standard of excellence which each one, in the diversity of taste or judgment, may have formed.

Generally, they are kept distinct, and preserved at least in their original purity, if not improved.

Some planters, who are noted for good management and good living, cultivate at least two or three kinds, which are not suffered to become mixed, so as to have the benefit of all the distinctive qualities of the grain in all the forms in which it is used.

Too many, however, content themselves with a *single* kind, if such may be said of a heterogeneous mixture of every variety that results from indiscriminate cultivation.

As a stock corn, the gourd seed, from its easy mastication, is perhaps generally preferred, a preference, notwithstanding the property and the size of the ear and grain, to which it is not fully entitled, being perhaps the lightest and least nutritious of all the varieties.

The white flint is unequalled for bread, which, when properly prepared, approaches most nearly that made from wheat; and for that famed Maryland and Virginia dish, "*great hominy*," a luxury which few substantial planters will forego at their tables, is indispensable.

Its great hardness forms the objection to its use for stock, particularly for old horses and oxen—an objection which, however, may be obviated by soaking it in water for a few hours.

It is a heavy corn, and contains a large proportion of nutriment; is perhaps as little affected by weevil as any other, and withstands the drought better than any other kind; and it is admitted that it yields most fodder.

The Tuscarora, which is an intermediate variety, originating doubtless in a mixture of the white flint and gourd seed, and in which the opposite and objectionable properties of these are in a measure overcome, is decidedly, for common purposes, the most valuable, as it is believed to be the most generally cultivated variety; for the size of the ear, the smallness of the cob, and perhaps the yield per acre, it is unsurpassed.

It requires careful selection, having a tendency, in rich land, to run too much to stalk or to return to one or the other of the varieties in which it originated.

Contrary to the too generally entertained opinion that all our seeds *run out* in time, and require continual changes from abroad, this corn has been cultivated for more than thirty years on the same plantation, in which time it has been greatly improved.

The flour corn is highly esteemed by many for bread, being very white, and pulverizing readily in the mill to a soft impalpable meal, free from the gritty character of that from the flinty varieties. Its chief excellence, however, is found in its superiority for use in the green or immature state, as the *roasting ear*, being unequalled for the pulpy sweetness and tenderness of the grain when so dressed.

It is claimed, for some of the yellow varieties, that they are the most nutritious, as evidenced by the relative weight of the grain and the per centage of alcohol produced by distillation; they are, however, unsuitable for bread, having a raw dough-like taste, and are believed to be unwholesome, intestinal diseases being sometimes traced to their use.

Corn with us is cultivated chiefly in the drill, being planted on the ridge or in the water furrow, according to the character of the ground, whether flat and low or high and rolling; the success of either mode depending somewhat on the moisture or dryness of the succeeding season.

The most usual time of planting is about the first of March; the only motive for planting earlier being to get out of the way of the cotton crop; the cultivation of which is too much embarrassed by a late crop of corn.

The plough is the principal implement employed in the cultivation, and it is rarely gone over more than twice with the hoe.

The blades are generally in a condition to be gathered for fodder between the *laying by* of the cotton and the commencement of the picking season.

The tops or top fodder are very rarely saved, as in the northern States; and the blades, after being dried in the field, and tied in bundles, are put up in stacks in or near the barn yard, but more usually in convenient places in the fields where they grow.

Some planters gather their corn in the latter part of August, or before the press

of the cotton picking season. If it is suffered to remain in the field, as it frequently is, until the approach of winter, it is usual to bend down the stalk below the ear, as in that inverted position it is better protected from the weather, the shuck, or husk, very effectually shedding the rain, and preventing the mildew and sprouting of the grain. It is also less exposed to damage from violent winds, which frequently occur about the period of the autumnal equinox, and better protection against the depredations of the woodpecker, blackbird, and other enemies, is thus afforded.

The proper time and mode of housing corn, with reference to the ravages of the weevil, have long been a contested question among planters.

Many store it away in open, well ventilated cribs, with latticed sides. Others sprinkle the different layers of corn, always put up in the *shuck*, with a weak brine, or strew the berries or leaves of the China tree, or the bark and leaves of the sassafras, through the mass in the same way.

None of these expedients have proved effectual, and I am inclined to think, from conversation with many judicious, practical planters, that the cribs cannot be too close or dark.

It is the result of their experience, also, that the *destruction* of the weevil, which is deposited in the field, is best accomplished by gathering the corn when quite wet, immediately after a rain, and housing it in that state. Sufficient moisture is retained to occasion a degree of heat in the mass, adequate to the destruction of the weevil, either in its mature or larva state, without at all damaging the corn. The close, dark crib secures it then from further damage, as very few weevil will find access to it.

It must be understood, however, that the corn is not to be exposed to rain after being pulled from the stock, or when lying in heaps on the ground. If so, it becomes saturated, and, if put up in that state, would infallibly mildew and spoil.

In gathering corn in the field, it is *strip-shucked*, as it is termed; that is, the footstalk is broken off within the shuck, so as to leave the outer coarse and weathered folds attached to the stalk, the ear remaining enveloped in two-thirds of the inner sound and softer folds or layers, which serve not only to protect the corn from shelling off and wasting in the hauling and housing, but supply a large store of valuable forage for mules and cattle, even more nutritious, when properly treated, than the blades themselves.

It is difficult to estimate the average production per acre, throughout the State. Perhaps it is as low as twenty bushels. Thirty bushels are accounted a very fair crop, and forty a large one.

The total production of corn in the State, in 1849, was stated at 22,446,000 bushels, equal to about thirty-seven bushels to each individual inhabitant.

Mississippi ranks only as eleventh as a corn producing State, making a little over a third of the quantity produced in Ohio and Kentucky. Three other States, including the adjoining State of Tennessee, make double the quantity. If our corn crop was suitably distributed, it might perhaps afford a scant subsistence, but the river counties are largely indebted to the western States for their supply.

GRASSES.*

Of our grasses, no attempt will be made here to give even a catalogue. Only a few of the most characteristic and useful will be noticed.

Foremost of these, although an introduced species, stands the Bermuda. It is rather a later grass, and revels in the hot, dry weather of midsummer, when most of our other grasses fail.

It will bear two or three heavy cuttings, and produces an almost incredible quantity of delicate nutritious hay, excelling, it is believed, in this particular, any other grass.

Like the sugar cane, it has not yet been so far naturalized as to perfect its seed, and is therefore propagated wholly by transplanting. The facility with which it extends itself by means of runners, which trail to a great length over the ground, striking root at every joint, from which spring also numerous narrow fine blades, forming a thick, matted, luxuriant growth, soon spreads it over a considerable

* From Waller's Agricultural Report of Mississippi.

space. Indeed, this property, its tenacity of life, and the depth to which it drives its rootlets, render it a terror to many planters almost as great as the bitter coco, of the sugar plantations in Louisiana.

It is true that it is rather troublesome to contend with in the cultivation of a corn or cotton crop on ground on which it has become thoroughly established; but with proper management it can be eradicated.

Shade is inimical to its growth, and any crop that will cover the ground very densely through the summer and fall, will in a year or two destroy it.

It is emphatically the best grass for our climate, and the only one that fully withstands the scorching heats and severe droughts of our summers.

Forming a dense compact sod, it is destined to be the chief agent in reclaiming those extensive tracts of broken lands in the river counties, once unsurpassed for fertility and productiveness, but which, by negligent or injudicious cultivation, have become defaced with unseemly gulleys and gaping ravines, to arrest and fill up which, must be the first step in reclaiming them.

The Natchez grass, a native which derives its name from first being noticed about the commons of that city, is found overspreading the bluff lands of the river counties. To what extent it has spread in other sections of the State, I am not fully prepared to say. It is a coarse luxuriant grass, growing in tufts or bunches, and bearing its seed in a head, enveloped in a black powder, or smut, which renders it unightly and disagreeable. It appears to stand the drought well, and, notwithstanding it is coarse and tough, cattle seem to thrive upon it.

The crab grass, (*panicum sanguinale*), which has a very wide geographical range, is perhaps the most abundant and persistent species here. It is that with which the planter has chiefly to contend in the cultivation of the cotton and corn crop. It has ample time to come to maturity after the cultivation of the latter has ceased, producing generally a heavy and luxuriant crop between the corn rows, from which most of the crab grass hay saved is *pulled* by the hand.

There are many other native grasses, such as the crow-foot and other yard grasses, but none of them has assumed any importance for producing or saving of hay.

The timothy, blue grass, and orchard grass, receive some attention in the northern part of the State, but are rarely met with in the other portions of it.

The white clover is pretty generally distributed, grows luxuriantly in good soil, and might be turned to good account but for its objectionable property of salivating stock, especially horses, when grazing upon it.

Experiments have been made in the cultivation of red clover with the use of plaster of Paris with very satisfactory results.

SUGAR—ITS CULTURE AND CONSUMPTION IN THE WORLD.*—NO. 2.

There can be no doubt whatever, that the consumption of sugar in Great Britain is capable of very large increase; moderate cost, and the removal of restrictions to its general use, being the main elements required to bring it about. The question of revenue must, of course, be a material consideration with government; but recent experience certainly leads to the conclusion that it would not suffer under a further reduction of duty.

The revenue derived from sugar, before the reduction of the duty, was five millions per annum; in the past two years it reached nearly four millions.

The reduction in duties which took place in 1845, may be said to have answered the expectations formed of it, as regards the increase of consumption, which there is no doubt would have even gone beyond the estimate, if the failure in the crop of sugar in Cuba—that most important island, which usually yields one-fifth of the cane crop of the whole world—had not driven up prices in the general market of the continent, and, in consequence, diverted the supply of free labor sugar from this country. As it was, however, the consumption of the United Kingdom, which in 1844 was 206,472 tons; in 1845 was not less than 243,000—Sir Robert Peel's estimate was 250,000 tons—the average reduction in price to the consumer during the latter year having been 20 per cent. The large increase in subsequent years I have already shown.

* By P. L. Simmonds, of London.

The consumption of sugar we find, then, has been steadily and rapidly increasing in this country, and if we add together to the refined and raw sugar and molasses used, it will be seen that the consumption of 1852 amounted to 400,178 tons; which is at the rate of 29 lbs. per head of the population per annum. Whilst the quantity retained for home consumption in the United Kingdom, in 1844, was but 4,130,000 cwt., the amount had risen in 1852 to upwards of 8,000,000 cwt.

Sugar unrefined, entered for home consumption :

Years.	Colonial raw.	Foreign raw.	Total.
	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>
1848.....	5,936,355	1,225,866	6,162,221
1849.....	5,424,248	498,038	5,922,386
1850.....	5,201,206	911,115	6,112,321
1851.....	5,872,288	1,383,286	6,255,574
1852.....	6,241,581	687,269	6,928,850

To the foregoing should be added the following quantities of refined sugar and molasses, entered for home consumption :

Years.	Refined sugar and candy.	Molasses.	Total.
	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>
1848.....	46,292	637,050	683,342
1849.....	75,392	812,330	887,722
1850.....	116,744	917,588	1,034,362
1851.....	338,734	773,035	1,111,769
1852.....	274,781	799,942	1,074,723

The quantity of sugar refined by our bonded refiners, and exported, is shown by the following figures. The increase in 1851 was one-fourth in excess of the previous year :

	<i>Cwt.</i>
1848.....	248,702
1849.....	222,900
1850.....	209,148
1851.....	258,563
1852.....	214,299

The following were the imports of sugar into Great Britain in 1848 and 1851, respectively, and the quarters from whence supplies were derived :

	1848.	1851.
	<i>Tons.</i>	<i>Tons.</i>
West Indies	121,600	153,300
Mauritius	43,600	50,000
East Indies.....	65,200	78,286
Java and Manilla	11,000	20,850
Havana, Porto Rico, and Brazil	76,900	76,526
	318,300	378,962

The production of sugar in the last four years may be stated comparatively as follows :

Countries.	1849.	1850.	1851.	1852.
CANE SUGAR.				
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Cuba	220,000	250,000	252,000	320,000
Porto Rico.....	43,600	48,200	49,500	50,000
Brazil.....	106,000	103,000	113,000	100,000
United States.....	98,200	120,400	103,200	110,000
The West Indies :				
1. French Colonies..	56,300	47,200	50,000	50,000
2. Danish....do....	7,900	5,000	6,000	5,000
3. Dutch.....do....	13,800	14,200	15,000	20,000
4. British.....do....	142,200	129,200	148,000	140,000
The East Indies.....	70,403	67,300	66,000	60,000
Mauritius.....	50,782	57,800	55,500	65,000
Java	90,000	89,900	99,347	104,542
Manilla	20,000	20,000	20,000	20,000
	919,182	952,200	977,547	1,044,522
BEEET ROOT SUGAR.				
				<i>Estimated.</i>
France	38,000	61,000	75,000	60,000
Belgium	5,000	6,000	8,000	9,000
Zollverein	33,000	38,000	49,000	50,000
Russia	13,000	14,000	15,000	16,000
Austria	6,500	10,000	15,000	18,000
	95,000	129,000	162,000	153,000
Cane sugar	919,182	952,200	977,547	1,044,542
Total	1,014,682	1,081,200	1,139,547	1,197,542

The price of sugar has, however, fallen considerably, and like many other things—corn, and cotton, and tea—has been lower for a long period than ever was known before.

Average price per London Gazette.

Year ending July 5—	British West India.	Mauritius.
1842.....	37s. 0d.	.....
1843.....	34 7	33s. 10d.
1844.....	34 9	34 7
1845.....	31 3	30 3
1846.....	35 3	34 2
1847.....	32 11	32 1
1848.....	24 3	23 3
1849.....	24 4	24 0
1850.....	25 3	28 8
1851.....	27 3	26 9
Half-year ending January 5, 1852.....	27 3	26 9

Thus, it is equally clear that the fall in the price has been very considerable since 1845, and that in 1849 and 1850 the price of sugar was about 10s. per cwt.,

or nearly one-third less than in 1838. The planters complain of the fall of price; and the only question in dispute is whether the fall has been occasioned by the reduction of the duties. Now the reduction of duties subsequent to 1846 and to 1851, was, on brown Muscovado sugar, from 13s. to 10s., or 3s.; and on foreign, from 21s. 7d. to 16s. 4d., or 5s. 3d. At the same time there was a very large increase of consumption, and the price, as of almost all articles, would not have been reduced to the full extent of the reduction of the duties, and certainly not reduced in a much greater degree, had there not been other causes at work to reduce the price. Between 1846 and 1851 freight from the Mauritius fell from £4 1s. 8d. to £2 13s. 9d., or 35 per cent.; and that reduction of price was not made from the planter. In the interval, too, great improvements were made in the manufacture of sugar; and in proportion as the article was produced cheaper, it could be sold cheaper, without any loss to him.

I shall now take a separate review of the capabilities and progress of the leading sugar producing countries.

Production in the United States.—Sugar cultivation, in the United States, is a subject of increasing interest. The demand is rapidly advancing. Its production in the State of Louisiana, to which it is there principally confined, is a source of much wealth. In 1840, the number of slaves employed in sugar culture was 149,890, and the product 119,947 hogsheads of 1,000 pounds each; besides 600,000 gallons of molasses. Last year the crop exceeded 240,000 hogsheads, worth 12,000,000 of dollars. The capital now employed is 75,000,000 of dollars. The protection afforded by the American tariff has greatly increased the production of sugar in the United States. From 1816 to 1850 this increase was from 15,000 hogsheads to 250,000 hogsheads.

In 1843, the State of Louisiana had 700 plantations, 525 in operation, producing about 90,000 hogsheads. In 1844, the number of hogsheads was 191,324, and of pounds, 204,913,000; but this was exclusive of the molasses, rated at 9,000,000 gallons. In 1845 there were in Louisiana 2,077 sugar plantations, in 25 parishes; 1,240 sugar houses, 630 steam power, 610 working horse power; and the yield of sugar was 186,650 hogsheads, or 207,337,000 pounds.

The introduction of the sugar cane into Florida, Texas, California, and Louisiana, probably dates back to their earliest settlement by the Spaniards or French. It was not cultivated in the latter, however, as a staple product before the year 1751, when it was introduced, with several negroes, by the Jesuits, from St. Domingo. They commenced a small plantation on the banks of the Mississippi, just above the old city of New Orleans. The year following, others cultivated the plant and made some rude attempts at the manufacture of sugar. In 1758, M. Dubreuil established a sugar estate on a large scale, and erected the first sugar mill in Louisiana, in what is now the lower part of New Orleans. His success was followed by other plantations, and in the year 1765 there was sugar enough manufactured for home consumption; and in 1770, sugar had become one of the staple products of the colony. Soon after the revolution a large number of enterprising adventurers emigrated from the United States to Lower Louisiana, where, among other objects of industry, they engaged in the cultivation of cane, and by the year 1803 there were no less than eighty-one sugar estates on the delta alone. Since that period, while the production of cane sugar has been annually increasing at the south, the manufacture of maple sugar has been extending in the north and west.

Hitherto, the amount of sugar and molasses consumed in the United States has exceeded the quantities produced—consequently there has been no direct occasion for their exportation. In the year 1815 it was estimated that the sugar made on the banks of the Mississippi amounted to 10,000,000 pounds.

According to the census of 1840, the amount of cane and maple sugar produced in the United States was 155,100,089 pounds, of which 119,947,720 pounds were raised in Louisiana. By the census of 1850, the cane sugar made in the United States was 247,581,000 pounds, besides 12,700,606 gallons of molasses; maple sugar, 34,249,886 pounds, showing an increase, in ten years, of 126,730,077 pounds.

The culture and manufacture of sugar from the cane, with the exception of a small quantity produced in Texas, centres in the State of Louisiana—where the cane is now cultivated and worked into sugar in twenty-four parishes. The extent of sugar lands available in those parishes is sufficient to supply the whole consumption of the United States. Sugar cultivation was carried on in Louisiana to a small extent before its cession to the United States. In 1818 the crop had

reached 25,000 hogsheads. In 1834-'35 it was 110,000 hogsheads, and in 1844-'45 204,913 hogsheads. Each hogshead averaging 1,000 pounds net, and yielding from 45 to 50 gallons of molasses.

The number of sugar estates in operation in 1830 was 600. The manual power employed on these plantations was 36,091 slaves, 282 steam-engines, and 406 horse power. The capital invested being estimated at 50,000,000 dollars. In 1844 the estates had increased to 762, employing 50,670 slaves, 468 steam-engines, 354 horse power.

The crop of 1849-'50 was 247,923 hhds. of 1,000 lbs., which, at an average of 3½ cents, amounted to nearly 9½ million dollars. The quantity of molasses produced was more than 12 million gallons, worth, at 20 cents the gallon, about 2,400,000 dollars, giving a total value of close upon 12 million dollars, or an average to each of the 1,455 working sugar houses of 8,148 dollars.

The overflow of the Mississippi and Red rivers in 1850, shortened the crop near 20,000 hhds., and was felt in subsequent years. Since 1846, not less than 355 sugar mills and engines have been erected in this State. The sugar crop of 1851-'52 was 236,547 hhds., produced by 1,474 sugar houses, 914 of which were worked by steam, and the rest by horse-power. Texas raises about 8,000 to 10,000 hhds. of sugar, and Florida and Georgia smaller quantities.

In the year ending December, 1851, there were taken for consumption in the United States about 132,832 tons of cane sugar, of which 120,599 were foreign imported. The quantity consumed in 1850 was 104,071 tons, of which 65,089 was foreign.

Production in Cuba.—The average yearly production of sugar in Cuba has been, in the five years from 1846 to 1850, 18,690,560 arrobas, equal to 467,261,500 lbs., or 292,031 hhds. of 1,600 lbs. weight. The crop of 1851 was estimated at twenty-one and a-half million arrobas, equal to about 335,937 West India hhds. Thus, the increase from 1836 to 1841, has been as 29 per cent.; from 1841 to 1846, as 25 per cent.; and from 1846 to 1851, as 45 per cent. A portion of sugar is also smuggled out, to evade the export duty, and by some this is set down as high as a fourth of the foregoing amounts.

In the three years ending 1841, the exports of the whole island were 2,227,624 boxes; in the three years ending 1844, 2,716,319 boxes; in the three years ending with 1847, 2,805,530 boxes.

Between 1839 and 1847, the exports had risen from 500,000 to 1,000,000 boxes. The following table exhibits the quantity shipped from the leading port of Havana, to different countries:

Countries.	Sugar boxes of about 400 lbs. each.	
	1850.	1851.
Spain.....	81,267	101,762
United States.....	146,672	199,204
England.....	25,697	46,615
Cowes and a market.....	221,385	270,010
The Baltic.....	45,085	81,866
Hamburg and Bremen.....	29,271	33,165
Holland.....	23,242	26,828
Belgium.....	62,849	29,814
France.....	44,947	46,517
Trieste and Venice.....	38,627	14,832
Italy.....	2,856	5,243
Other places.....	13,888	16,601
Boxes.....	743,249	872,457

Our West India possessions have, owing to the want of a good supply of labor and available capital to introduce various scientific improvements, somewhat retrograded in the production of sugar; which, from the low price ruling the past year or two, has not been found a remunerative staple.

The two large islands of Jamaica and Cuba, may be fairly compared as to their production of sugar. From 1804 to 1808, Jamaica exported, on the average, annually, 135,331 hhds., and from 1844 to 1848, it had decreased to 41,872 hhds. The exports from the single port of Havana, which in the first named period were 165,690 boxes, rose during the latter period to 635,185 boxes; so that the shipments of sugar from Jamaica, which were in 1804 to 1808 double those of Havana—in the period from 1844 to 1848, were five times less!

Cuba will be able to withstand the crisis of the low price of sugars better than the emancipated British colonies, for the following reasons :

1. It will find, in its present prosperity, a power of resistance that no longer exists in the British sugar-growing colonies.

2. Because it enjoys in the Spanish markets a protection for at least 16,955 tons of its sugar, or about eight-tenths of its total exportation.

3. Because it has secured a very strong position in the markets of the United States; and both from its proximity to, and its commercial relations with that country, as also from the better quality of its sugar, will command the sale of at least 33,500 tons, or about 16 per cent. of its total production.

4. Because in 1854, after the duties shall have been equalized, it will be enabled to undersell the British article in its own market.

5. Because, not being an exclusively sugar-growing colony, as are almost all British West India islands, it may suffer from the present depressed condition of the sugar market, but cannot be entirely ruined, owing to its having commanding resources, and many other valuable staples—coffee, copper, cotton, &c.

6. Because, by improving its agriculture and introducing useful machinery, railroads, &c., for which it has large available capital, it can produce sugar at a diminished cost.

7. And lastly, because the proprietors have *continuous* labor at command, until slavery be abolished—of which there seems no present prospect. The slave population numbers about 350,000, and the free colored population about 90,000.

The consumption of sugar, during 1847, very singularly tallied with the production of the British colonies that year—being exactly 289,000 tons; but, as 50,000 tons of foreign sugar were consumed, an accumulation of British plantation sugar necessarily remained on hand.

The production of the French colonies was 100,000 tons, of which France received nine-tenths.

In 1836, Jamaica made 1,136,554 cwt. of sugar. In 1840, its produce had fallen off to 545,600 cwt.; but in the same years, Porto Rico had increased its sugar crop, from 498,000 cwt., to 1,000,000 cwt. In 1837, Cuba made 9,060,058 arrobas of sugar, equal to 132,765 hhds.; in 1841, it had increased to 139,000 hhds. The largest crop grown in the West Indies, since 1838, was that of 1847, which amounted to 159,600 tons.

The annexed returns of the sugar crops of Barbadoes and Jamaica, for a series of years, may be interesting :

Sugar crops of the island of Barbadoes, from 1827 to 1846 and 1851.

1827....	18,109 hhds.	1834....	28,710 hhds.	1841....	17,801 hhds.
1828....	28,533 "	1835....	25,371 "	1842....	21,607 "
1829....	23,486 "	1836....	26,358 "	1843....	24,587 "
1830....	26,360 "	1837....	31,670 "	1844....	23,147 "
1831....	28,174 "	1838....	33,058 "	1845....	24,767 "
1832....	19,761 "	1839....	28,213 "	1846....	21,936 "
1833....	28,099 "	1840....	13,589 "	1851....	48,000 "

Sugar crops of the island of Jamaica, from 1790 to 1851.

1790....	91,131 hhds.	1809....	114,630 hhds.	1828....	101,575 hhds.
1791....	91,020 "	1810....	112,208 "	1829....	97,893 "
1792....	..... "	1811....	138,292 "	1830....	100,205 "
1793....	82,136 "	1812....	113,173 "	1831....	94,381 "
1794....	97,124 "	1813....	109,158 "	1832....	98,686 "
1795....	95,372 "	1814....	104,558 "	1833....	85,161 "
1796....	96,460 "	1815....	127,209 "	1834....	84,756 "
1797....	85,109 "	1816....	100,382 "	1835....	77,970 "
1798....	95,858 "	1817....	123,766 "	1836....	67,094 "
1799....	110,646 "	1818....	121,758 "	1837....	61,505 "
1800....	105,584 "	1819....	116,382 "	1838....	69,613 "
1801....	139,036 "	1820....	122,922 "	1839....	49,243 "
1802....	140,113 "	1821....	119,560 "	1840....	33,066 "
1803....	115,496 "	1822....	94,515 "	1841....	34,491 "
1804....	112,163 "	1823....	101,271 "	1842....	50,295 "
1805....	150,352 "	1824....	106,009 "	1843....	44,169 "
1806....	146,601 "	1825....	72,090 "	1844....	34,444 "
1807....	135,203 "	1826....	106,712 "	1845....	47,926 "
1808....	132,333 "	1827....	87,399 "	1851....	41,678 "

The average of the five years ending 1851, being the first five of free trade, shows an annual export from Jamaica of 41,678 hhds.

The quantity of unrefined sugar imported from the British West Indies and Guiana in a series of years since the emancipation, is shown by the following abstract:

	Cwts. Sugar.	Cwts. Molasses.		Cwts. Sugar.	Cwts. Molasses.
1831.....	4,103,800	323,306	1841.....	2,148,218	430,221
1832.....	3,773,456	553,663	1842.....	2,508,725	471,759
1833.....	3,646,205	686,794	1843.....	2,509,701	605,632
1834.....	3,843,976	650,366	1844.....	2,451,063	579,458
1835.....	3,524,209	507,495	1845.....	2,853,995	491,083
1836.....	3,601,791	526,535	1846.....	2,147,347	477,623
1837.....	3,306,775	575,657	1847.....	3,199,814	531,171
1838.....	3,520,676	638,007	1848.....	2,794,987	385,484
1839.....	2,824,372	474,307	1849.....	2,839,888	605,487
1840.....	2,214,764	424,141	1850.....	2,586,429	470,187

Mauritius.—In the year 1813 the exports of sugar from this island were but 549,465 lbs., and increasing gradually to 128,476,547 lbs. in 1849, or two-hundred fold in the thirty-six years.

The equalization of the duties in 1825, and the admission of Mauritius sugars into England on the same footing as those from the West Indies, had the effect of stimulating the sugar trade of Mauritius, and advancing it to its present remarkable success. Notwithstanding its immense crops, scarcely more than three-fifths of the island is yet under cultivation; but it has the advantage of a cheap and abundant supply of labor, and much improved machinery has been introduced. The planters first commenced introducing coolies in 1835, and were for some time restricted to the single port of Calcutta for their supply.

The recent advices from Mauritius furnish some interesting information regarding the progress making in the sugar production of that colony. In reference to the cultivation of the cane, it is stated that by the introduction of guano upon several estates in the interior, the production has been very largely increased; but as the value and economy of manure has not been hitherto sufficiently estimated, its introduction has not been so general as could be desired. The importance of free labor to the cultivation of the estates has now become fully appreciated by the planters; it being found that an equal amount of work can be obtained by this means from a less number of hands, and that at lower rates of wages than were current in previous years, the average of which is shown in the following table:

Years.	Number of coolies employed.	Aggregate amount of wages paid per week.	Average wages per head per week.	
		£.	s.	d.
1846	47,733	33,484	14	0
1847	48,314	35,338	14	9
1848	41,777	26,627	12	9
1849	45,384	27,625	12	2
1850	47,912	31,664	12	3
1851	42,275	27,832	12	2

In 1826, to make from 25 to 30,000,000 lbs. of sugar, it required 30,000 laborers, (slaves;) at the present time, with less than 45,000 (from which number fully 5,000 must be deducted as absent from work from various causes,) 135,000,000 lbs. are produced, or about five times the quantity under slavery. The coolies are found to be an intelligent race, who have become inured to the work required, and by whose labor this small island can produce the fifth part of the consumption of the United Kingdom, and that with only about 70,000 acres under cane cultivation. About 10,000 male immigrants, introduced since 1843,

are not now working under engagement, but are following other occupations, and thus become permanent consumers. Some cultivate land on a small scale on their own account, but very few plant canes, as it requires from eighteen to twenty months before they obtain any return for their labor; but the most important fact established by this and other official statements is, that only a small number of immigrants leave the colony at the expiration of their industrial residence. In the manufacture of sugar from the cane, considerable improvement has been effected by the introduction of new methods of boiling and grinding. The vacuum pan and the system of Wetsell are all tending to economize the cost of production, and to save that loss which for years amounted, in grinding alone, to nearly one-third of the juice of the cane. The planters begin to find that they can increase the value of their sugar 30 to 40 per cent. by these improvements, and that their future prosperity depends upon carrying them out. Unfortunately, however, here, as in many other of our colonies, a very large number of planters do not yet appreciate the advantages to be obtained by the adoption of improved machinery and manufacture, or by improved cultivation, and still struggle on under the old system of waste and negligence, which can only result in the ruin and destruction of their property.

In 1827, the number of sugar estates in operation in Mauritius, were 49 worked by water power, 50 by cattle or horses, and 22 by steam—total 111; in 1836, this number had increased to 186, viz.: 64 moved by water power, 10 by horse, and 112 by steam. In 1839, the number was 211, of which 138 were worked by steam power—70,292 acres were then under cultivation with sugar. There are now about 490 sugar estates, whereof only 231 have mills—42 are worked by water power, the rest by steam.

The annual Mauritius crops, as exported, for the last ten years, have been as follows. The shipments frequently extend beyond a year; hence a discrepancy sometimes between the year's crop and the year's export:

	Tons.
1842-'43.....	24,400
1843-'44.....	28,600
1844-'45.....	37,600
1845-'46.....	49,100
1846-'47.....	64,100
1847-'48.....	59,021
1848-'49.....	50,782
1849-'50.....	51,811
1850-'51.....	55,000
1851-'52.....	65,080

Besides its exports to Great Britain, Mauritius ships large quantities of sugar to the Cape of Good Hope and Australia.

Its local consumption is moreover set down at about 2,500 tons.

The progressive increase in its exports is marked by the following return of imports into Great Britain from the island:

	Cwt.		Cwt.
1826.....	93,723	1839.....	604,671
1827.....	186,782	1840.....	690,294
1828.....	204,344	1841.....	545,356
1829.....	361,325	1842.....	716,009
1830.....	297,958	1843.....	696,652
1831.....	485,710	1844.....	545,415
1832.....	517,553	1845.....	716,173
1833.....	521,904	1846.....	845,197
1834.....	516,077	1847.....	1,193,571
1835.....	553,891	1848.....	886,184
1836.....	558,237	1849.....	893,524
1837.....	497,302	1850.....	1,003,296
1838.....	537,455	1851.....	999,337

East Indies.—Sugar is a very old and extensive cultivation in India. It would probably be within the mark, to estimate the annual produce of the country at a million of tons. An official return shows that the quantity of sugar carried on one road of the interior, for provincial consumption, is about equal to the whole quantity shipped from Calcutta—some 50,000 or 60,000 tons.

India is fast becoming a great sugar producing country, although its produce and processes of manufacture are rude and imperfect. The coolies who return from time to time to the Indian ports, bring with them much acquired knowledge and experience from the Mauritius.

In 1825, the import of sugar from the East Indies was but 146,000 cwt., and it fluctuated greatly in succeeding years, being occasionally as low as 76,600 cwt. In 1837 the quantity imported was just double what it was in 1827. In 1841, it had reached as high as 1,239,738 cwt., and subsequently kept steady for a few years at 1,100,000 cwt., and for the last four years has averaged 1,400,000 cwt.

Java.—Attention has been withdrawn, in a great measure, from sugar cultivation in Java, owing to coffee being found a more remunerative staple. The following figures serve to show the extent of its exports of sugar:

Cwt.		Cwt.	
1826.....	23,565	1838.....	873,056
1827.....	38,357	1839.....	999,895
1828.....	31,301	1840.....	1,231,135
1829.....	91,227	1841.....	1,252,047
1830.....	129,300	1842.....	1,105,856
1831.....	144,077	1843.....	1,162,211
1832.....	292,705	1844.....	1,260,790
1833.....	151,128	1845.....	1,812,500
1834.....	443,911	1848.....	1,798,612
1835.....	523,162	1850.....	1,797,874
1836.....	607,336	1851.....	1,987,957
1837.....	820,063	1852.....	2,090,845

In 1840, we imported from Java 75,533 cwt.; in 1841, 87,342 cwt.; in 1842, 24,922 cwt.; in 1843, 35,161 cwt.; and in 1844, about 72,000 cwt.; but most of this was only sent to Cowes, for orders, to be transhipped to the continent.

MANAGEMENT OF NEGROES.

As the proper management of our negroes is a subject not second in importance to any discussed in your columns, I hope it will not be deemed amiss if, in giving my views, I enter somewhat into detail. That on some points I shall be found to differ in opinion from some of your readers and correspondents, is to be expected. I shall not, however, object to any one's expressing his dissent, provided it be done in the spirit of kindness.

Our first obligation is undoubtedly to supply them with suitable food and clothing. Here the question arises, What is sufficient food?—for, as there is a difference in practice, there must be also in opinion, among owners. The most common practice is to allow each hand that labors, whether man, woman, or child, (for a boy or girl ten years old or over, who is healthy, and growing rapidly, will eat quite as much as a full-grown man or woman,) 3½ pounds of bacon, if middling, or 4 pounds if shoulder, per week, and bread at will—or, if allowed in this also, a peck of meal is usually thought sufficient; with plenty of vegetables, this allowance is quite sufficient; but if confined to meat and bread, negroes who work hard will eat a peck and a half of meat per week.

As I live on the farm, and occasionally inspect the cooking for the negroes, I see that they have enough, but nothing to waste; and I speak from personal observation when I state that, if without vegetables, they will eat this quantity.

With very little trouble we can always, during spring and summer, have plenty of cabbage, kale or mustard for greens; also squashes, Irish potatoes, and beans; in fall and winter, sweet potatoes, turnips, pumpkins, and peas. I believe there is no labor devoted to a provision crop that pays equal to that bestowed on a plain kitchen garden. As there is no vegetable of which negroes are more fond than of the common field pea, it is well to save enough of them in the fall to have them frequently during the spring and summer. They are very nutritious, and if cooked *perfectly done*, and well seasoned with red pepper, are quite healthy. If occasionally a little molasses be added to the allowance, the cost will be but a trifle, while the negro will esteem it as a great luxury. As most persons feel a great reluctance at paying out money for little luxuries for negroes,

I would suggest the propriety of sowing a small patch of wheat for their benefit. The time and labor will never be missed. Many persons are in the habit of giving out the allowance to their negroes once a week, and requiring them to do their own cooking. This plan is objectionable on various accounts. Unless better provided for taking care of their provisions than is common among negroes, some will steal the meat from others, and the loser is compelled for the remainder of the week to live on bread, or the master must give him an additional allowance. The master cannot expect full work from one who is but partially fed; while, on the other hand, if he will give the loser an additional supply, the negroes soon learn to impose upon his kindness, by being intentionally careless, or by trading off their meat and pretending it has been stolen. Another objection is, that some are improvident, and will get through with their whole allowance of meat before the week is gone, and, consequently, are a part of their time without any.

To making the negroes do their own cooking the objections are still more weighty. It encroaches upon the rest they should have, both at noon and at night. The cooking, being done in a hurry, is badly done; being usually burnt outside while it is raw within; and, consequently, is unhealthy. However abundant may be the supply of vegetables, the hands have no time to cook them, and consequently are badly fed, and have not the strength to do as much labor as they could otherwise perform with comfort.

The plan pursued by the writer is, to weigh out a certain amount of meat for each day, a portion of which is given to the cook every morning, to be boiled for dinner, and with it are cooked as many vegetables and as much bread as the negroes will eat; all of which is usually divided among them by the foreman. In the evening, enough is cooked for both supper and breakfast; so that by the time we are done feeding stock supper is ready, and the hands have only to eat and they are ready for bed. When the nights are long, the meat for supper and breakfast is sometimes divided without cooking. In addition to the above, the negroes, during spring and summer, usually get plenty of milk once a day. During fall and winter the quantity of milk is more limited, and what molasses they get they are made to win by picking cotton.

To make one negro cook for all is a saving of time. If there be but ten hands, and these are allowed two hours at noon, one of which is employed in cooking their dinner, for all purposes of rest, that hour had as well be spent in ploughing or hoeing, and would be equal to ten hours work of one hand; whereas the fourth of that time would be sufficient for one to cook for all. As there are usually a number of negro children to take care of, the cook can attend to these, and see that the nurses do their duty. I would add that, besides occasional inspection, it is made obligatory on the overseer frequently to examine the cooking and see that it is properly done.

One of your correspondents has endeavored to prove that lean meat is more nutritious than fat. It is, however, a well known fact that the more exhausting the labor, the fatter the meat which the negro's appetite craves, and it agrees well with him. This I regard as one of the instincts of nature, and think experience is opposed to your correspondent's theory.

As to clothing, less than three suits a year of every day clothes will not keep a negro decent, and many of them require more. Children, particularly boys, are worse than grown persons on their clothes, and, consequently, require more of them. I have never been able to keep a boy, from ten to sixteen years of age, decently clothed with less than four suits a year; nor would that answer if some of the women were not compelled to do their mending. It is also important that women who work out should, in addition to their usual clothing, have a change of drawers for winter.

As no article of water proof, suitable for an outer garment, and sufficiently cheap for plantation use, is to be had in the stores, the writer would suggest the propriety of having for each hand a long apron with sleeves, made of cotton osnaburgs and coated with well boiled linseed oil. In the fall, when picking cotton, this apron may be worn early in the morning until the dew dries off, then laid aside. By making it sufficiently loose across the breast, it can be used as an over coat at any time that the negro is necessarily exposed to the rain.

Patching may be done by the women on wet days, when they are compelled to be in the house. Or when a breeding woman gets too heavy to go to the field, she may be made to do a general patching for all the hands.

In furnishing negroes with bed clothes it is folly to buy the common blankets, such as sell for a dollar or a dollar and a quarter. They have but little warmth or durability. One that will cost double the money will do more than four times the service.

Besides whole clothes, negroes should have clean clothes; and in order to do this, they should have a little time allowed them to do their washing. As it is not convenient for all hands to wash at the same time, they may be divided into companies, and a certain evening assigned to each company. Those whose time it is to wash should be let off from the field earlier than the rest of the hands, and on that night should be free from all attention to feeding stock. The rule works equal; for those who have to do extra feeding on one night are in their turn exempt. It should, however, be an invariable rule not to allow any of them to wash on Saturday night, for they will be dirty on the Sabbath, and render as an excuse that their clothes are wet. On some large plantations, it is the daily business of one hand to wash and mend for the rest.

In building houses for negroes it is important to set them well up, (say 2½ or 3 feet from the ground to the sills,) so as to be conveniently swept underneath. When thus elevated, if there should be any filth under them, the master or overseer in passing can see it and have it removed. The houses should be neat and comfortable, and as far as circumstances will allow, it looks best to have them of uniform size and appearance; 16 by 18 feet is a convenient size for a small family. If there be many children in a family, a larger house will be necessary.

Many persons, in building negro houses, in order to get clay convenient for filling the hearth and for mortar, dig a hole under the floor. As such excavations uniformly become a common receptacle for filth, which generates disease, they should, by no means, be allowed. In soils where the clay will make brick, the saving of fuel, and the greater security against fire, render it a matter of economy to build brick chimneys. In all cases, the chimneys should be extended fully two feet above the roof, that there may be less danger in discharging sparks. They are also less liable to smoke. In consequence of negro houses being but one story high, the lowness of the chimneys renders them very liable to smoke from currents of wind driving down the flue. This may be effectually prevented by the following simple precaution: Around the top of the chimney throw out a base some eight or ten inches wide, and from the outer edge of this draw in the cap at an angle of thirty-five or forty degrees with the horizon, until true with the flue. No matter in what direction the wind blows, on striking this inclined plane the current will glance upwards and pass the chimney, without the possibility of blowing it down. On page 454 of Report of Commissioner of Patents, for 1844, will be found plates illustrative of my meaning. The wings of the angles, as explained in the report, are, however, unnecessary, as the remedy is effectual without them, though they evidently increase the draught. A coat of whitewash, inside and out, every summer, adds very much to the neat and comfortable appearance of the buildings, and is also, by its cleansing and purifying effect, conducive to health. The cost is almost nothing, as one barrel of good lime will whitewash a dozen common sized negro houses, and any negro can put it on.

If there be not natural shades sufficient to keep the houses comfortable, a row of mulberries, or such other shades as may suit the owner's fancy, should, by all means, be planted in front, and so as to protect the houses on the south and southwest.

The negroes should be required to keep their houses and yards clean; and in case of neglect should receive such punishment as will be likely to insure more cleanly habits in future.

In no case should two families be allowed to occupy the same house. The crowding a number into one house is unhealthy. It breeds contention; is destructive of delicacy of feeling, and it promotes immorality between the sexes.

In addition to their dwellings, where there are a number of negroes, they should be provided with a suitable number of properly located water closets. These may contribute an income much greater than their cost, by enabling the owner to prepare poudrette; while they serve the much more important purpose of cultivating feelings of delicacy.

There should, at all times, be plenty of wood hauled. Surely no man of any pretensions to humanity would require a negro, after having done a heavy day's work, to toil for a quarter of a mile under a load of wood before he can have a

fire. An economical way of supplying them with wood is to haul logs instead of small wood. This may be most conveniently done with a cart and pair of hooks, such as are used for hauling stocks to a saw-mill. Such hooks will often come in use, and the greater convenience and expedition of hooks instead of a chain will soon save more time than will pay for them.

The master should never establish any regulation among his slaves until he is fully convinced of its propriety and equity. Being thus convinced, and having issued his orders, implicit obedience should be required and rigidly enforced. Firmness of manner, and promptness to enforce obedience, will save much trouble, and be the means of avoiding the necessity for much whipping. The negro should feel that his master is his lawgiver and judge; and yet is his protector and friend, but so far above him, as never to be approached save in the most respectful manner. That where he has just cause, he may, with due deference, approach his master and lay before him his troubles and complaints; but not on false pretexs or trivial occasions. If the master be a tyrant, his negroes may be so much embarrassed by his presence as to be incapable of doing their work properly when he is near.

It is expected that servants should rise early enough to be at work by the time it is light. In sections of country that are sickly, it will be found conducive to health in the fall to make the hands eat their breakfast before going into the dew. In winter, as the days are short and nights long, it will be no encroachment upon their necessary rest to make them eat breakfast before daylight. One properly taken care of, and supplied with good tools, is certainly able to do more work than under other circumstances. While at work they should be brisk. If one is called to you, or sent from you, and he does not move briskly, chastise him at once. If this does not answer, repeat the dose and double the quantity. When at work I have no objection to their whistling or singing some lively tune, but no *drowsing* tunes are allowed in the field, for their motions are almost certain to keep time with the music.

In winter a hand may be exposed all day, but not so in summer. In the first of the spring a hand need not be allowed any more time at noon than is sufficient to eat. As the days get longer and warmer, a longer rest is necessary. In May, from one and a-half to two hours; in June, two and a-half; in July and August, three hours rest at noon. If the day is unusually sultry, a longer time is better. When the weather is oppressive, it is best for all hands to take a nap at noon. It is refreshing, and they are better able to stand pressing the balance of the day. Hands, by being kept out of the sun during the hottest of the day, have better health, and can do more work through the season than those who take what they call a good steady gait, and work regularly from morning till night. They will certainly last much longer.

If the corn for feeding is in the shuck, the husking should be done at noon; and all corn for milling should, during summer, be shelled at noon, that as the nights are short the hands may be ready for bed at any early hour.

If water be not convenient in the field where the hands are at work, instead of having it brought from a distance in buckets, it will be found more convenient to have a barrel fixed on wheels and carried full of water to some convenient place, and let a small boy or girl, with a bucket, supply the hands from the barrel. Some persons make each negro carry a jug or large gourd full of water to the field every morning, and this has to serve for the day.

During fall and winter, hands may be made to pack at night what cotton has been ginned in the day. The women may be required to spin what little roping will be necessary for plough lines, and to make some heavy bed quilts for themselves. Besides this there is very little that can properly be done of nights.

One of the most important regulations on a farm is to see that the hands get plenty of sleep. They are thoughtless, and, if allowed to do so, will sit up late of nights. Some of them will be up at all hours, and others, instead of going to bed, will sit on a stool or chair and nod or sleep till morning. By half past nine or ten o'clock, all hands should be in bed, and unless in case of sickness, or where a woman has been up with her child, if any one is caught out of bed after that hour, they should be punished.

A large-sized cow bell that could be heard two miles, and would not cost more than three or four dollars, would serve not only as a signal for bed time, but also for getting up of a morning, for ceasing work at noon and resuming it after dinner. Where the distance to be heard is not great, a common bar of cast steel,

hung up by passing a wire through one end, may be struck with a hammer, and will answer in place of a bell.

Most persons allow their negroes to cultivate a small crop of their own. For a number of reasons the plan is a bad one. It is next to impossible to keep them from working their crops on Sabbaths. They labor at nights when they should be at rest. There is no saving more than to give them the same amount, for like all other animals he is only capable of doing a certain amount of labor without injury. To this point he may be worked at his regular task, and any labor beyond this is an injury to both master and slave. They will pilfer to add to what corn or cotton they may have made. If they sell their crop and trade for themselves they are apt to be cheated out of a good portion of their labor. They will have many things in their possession under color of purchase which we know not whether they obtained honestly. As far as possible it is best to place temptation out of their reach. We have all their time and service, and can surely afford to furnish them with such things as they ought to have. Let us spend on them in extra presents as much as their crop (if they had one) would yield. By this means we may keep them from whiskey and supply them with articles of service to a much greater extent than they would get if allowed to trade for themselves, while we avoid the objections above stated.

Believing that the strolling about of negroes for a week at a time, during what are called Christmas holidays, is productive of much evil, the writer has set his face against the custom. Christmas is observed as a sacred festival. On that day as good a dinner as the plantation will afford is served for the negroes, and they all sit down to a common table, but the next day we go to work. From considerations both of morality and needful rest and recreation to the negro, I much prefer a week in July, when the crop is laid by, to giving three days at Christmas.

On small farms, where there are very few negroes, it may be proper to allow them to visit to a limited extent, but on large plantations there can be no want of society, and consequently no excuse for visiting except among themselves. If allowed to run about, they will rarely ever take wives at home. The men wish an excuse for absence, that under pretext of being at their wife's house they may run about all over the neighborhood. Let it be a settled principle that men and their wives must live together. That if they cannot be suited at home they must live single, and there will be no further difficulty. If a master has a servant and no suitable one of the sex for a companion, he had better give an extra price for such an one as he would be willing to marry, than to have one man owning the husband and another the wife. It frequently happens where husband and wife belong to different persons that one owner sells out and wishes to move. Neither is willing to part with the servant, or if one will consent, the other is not able to buy; consequently, the husband and wife must part. This is a sore evil, surely much greater than restricting to the plantation in making a selection.

In the infliction of punishment, it should ever be borne in mind that the object is *correction*. If the negro is humble and appears duly sensible of the impropriety of his conduct, a very moderate chastisement will answer better than a severe one. If, however, he is stubborn or impertinent, or perseveres in what you know to be a falsehood, a slight punishment will only make bad worse. The negro should, however, see from your cool, yet determined manner, that it is not in consequence of your excited temper, but of his fault, and for his correction that he is punished. As a general principle the legal maxim that "it is better ninety and nine guilty persons should escape than one innocent should suffer," is correct. It, however, has its exceptions. If, for instance, the negroes take to killing your pigs or stealing your chickens and eggs, and you cannot ascertain who are guilty, it is only necessary to put the whole "crowd" on half allowance of meat for a few days and the evil will end. This remedy is better than a perpetual fuss and suspicion on all.

In the intercourse of negroes among themselves, no quarrelling nor opprobrious epithets, no swearing nor obscene language, should ever be allowed. Children should be required to be respectful to those who are grown, more especially to the old, and the strong should never be allowed to impose on the weak. Men should be taught that it is disgraceful to abuse or impose on the weaker sex, and if a man should so far forget and disgrace himself as to strike a woman, the women should be made to give him the hickory and ride him on a rail. The wife, however, should never be required to strike her husband, for fear of its unhappy influences over their future respect for and kindness to each other.

The negroes should not be allowed to run about over the neighborhood; they should be encouraged to attend church, when it is within convenient distance. Where there are pious negroes on a plantation who are so disposed, they should be allowed and encouraged to hold prayer meetings among themselves; and when the number is too great to be accommodated in one of the negro houses, they should have a separate building for the purposes of worship. Where it can be done, the services of a minister should be procured for their special business. By having the appointments for preaching at noon, during summer, and at night during winter, the preacher could consult his own convenience as to the day of the week, without, in the least, interfering with the duties of the farm.

A word to those who think and care but little about their own soul or the soul of the negro, and yet desire a good reputation for their children. Children are fond of the company of negroes, not only because the deference shown them makes them feel perfectly at ease, but the subjects of conversation are on a level with their capacity; while the simple tales, and the witch and ghost stories so common among negroes, excite the young imagination and enlist the feelings. If in this association the child becomes familiar with indelicate, vulgar, and lascivious manners and conversation, an impression is made upon the mind and heart which lasts for years—perhaps for life. Could we, in all cases, trace effects to their real causes, I doubt not but many young men and women of respectable parentage and bright prospects, who have made shipwreck of all their earthly hopes, have been led to the fatal step by the seeds of corruption which, in the days of childhood and youth, were sown in their hearts by the indelicate and lascivious manners and conversation of their father's negroes. If this opinion be correct, an effort to cherish and cultivate the feelings and habits of delicacy and morality among our negroes is forcibly urged upon us by a regard for the respectability of our children, to say nothing of the prospects of both child and servant in another world, and of our own responsibility when the great Master shall require an account of our stewardship.

I have given you, Messrs. Editors, an outline of my own management. If any of your correspondents will point out a more excellent way, he will benefit your readers, and much oblige your friend.

AGRICOLA.

BEAR GRASS OF FLORIDA.

WASHINGTON, July 19, 1855.

DEAR SIR: In compliance with your request, I take pleasure in setting forth the facts respecting the bear grass of Florida.

You are aware that for many years I have labored to bring this plant into practical use in connexion with you and other gentlemen of your State. I have now the satisfaction to be assured that it bids fair soon to be realized to some extent through a scientific gentleman from Philadelphia, who is now in your State for the purpose of carrying out his enterprise on the headwaters of the St. John's and Indian river.

The above gentleman, Dr. Swarbe, has been experimenting for several months on various plants to produce "papier-mache." Through my friend, the Hon. Thos. B. Florence, of the House of Representatives, I directed his attention to the bear grass of Florida, samples of which, prepared in Florida, were forwarded to him, and which proved so satisfactory for the purpose he intended, that he fixed his mind on the article and determined to visit the State. He took his leave of me last May for that purpose, and, after examination, found the article so satisfactory that he returned to Philadelphia to make the necessary arrangements for carrying out his enterprise, the necessary funds being raised in Philadelphia through a stock company. He parted with me on the 4th of July last for Florida to put in operation his works located on Indian river.

The samples that he exhibited to me showed a perfect article for the use of cordage. He also represented that the cordage manufacturers of the east invariably approve of it for their purposes. He designs using the largest leaves for naval purposes and the refuse for "papier-mache." He further informs me that the manufacturers have engaged all he can prepare in several months. As the plant grows spontaneous in great abundance, he can produce hundreds of tons of both for the cordage and paper manufacturers.

Dr. Swarbe promised, when parting, to address me, giving the progress he was making. As I am not in possession of that information, from the fact that there has not been sufficient time elapsed to obtain his report, I am compelled to limit my remarks on this important subject. I have also the pleasure to state that Senator Mallory has taken a deep interest in the growth and preparation of a kindred article, the "arguva plant," which is cultivated to a limited extent at Key West, and which produces a good article for cordage, and is already in such demand as is likely to consume all that can be produced in many years.

I have been in correspondence with several machinists at Philadelphia, New York, Connecticut, and Boston, for the purpose of inventing a machine to convert this plant into hemp. These gentlemen have entered upon the experiment with much spirit and zeal. Senator Mallory having had the arguva leaves forwarded to New York, I have advised the machinists of that fact, with an order to them for the leaves, and in a reasonable time I expect to receive a report that one or more have succeeded in making a machine adapted to the object.

I am happy to believe that both these plants, arguva and bear grass, are destined to add much to the wealth of your State.

I should have mentioned above that Dr. Swarbe designs settling a colony of Germans in Florida to facilitate his operations.

Hoping that this may prove interesting, I am, respectfully, your obedient servant,

DAVID MYERLE.

Hon. DAVID L. YULEE.

BREADSTUFFS—THE CROPS OF THE PRESENT YEAR.

LABORATORY OF STATE CHEMIST, *Baltimore, August 8, 1855.*

GENTLEMEN: In a communication to your paper some time since I expressed the opinion, derived from my own personal observation and from a large correspondence, that the wheat crop of the present would not exceed that of the last year. One of the morning papers (the American) doubted the correctness of my opinion and the accuracy of the facts on which it was founded, and appealed to the coming harvest to prove the incorrectness of my opinion.

The harvest is now ended, and we have statements as to its product from all parts of the country. What do these say, when collated and compared with each other? That we have an extra crop? By no means; only that we have a full crop of wheat of fine quality to meet the demand for the next twelve months. In some parts of the country the wheat crop has been inferior in quantity to that of the last year, in other parts it has exceeded that quantity, but in many parts where large crops have been made they have been injured by the heavy and continued rains succeeding the harvest.

Compare, then, the present quantity of wheat on hand with that at the same time last year. We have not more of new wheat at this time than we had last year. Then there was a large stock of old wheat on hand; now there is scarcely any. This plainly shows a deficit, then, as to this year of the quantity of wheat for consumption. What is the latest news of the wheat crops from England? By the Agricultural Gazette of July 21st (and here let me say that the reports for this paper are collated from reliable correspondents in every district in England) I have the following: "There can be little doubt, taken as a whole, it (the wheat crop) will prove considerably short of last year." It at any rate cannot supply the home demand. There can be no importations from the Baltic, none from the Black Sea. Food must be sent to the armies and navies there—with what loss and waste we all know. One-fourth of the quantity of wheat would feed the same population at home as is now consumed in the Crimea.

From all of these facts, then, there must be a foreign demand for our wheat, and we have a less quantity to meet that demand and our wants than we had at this time last year. *In the face of all this prices must be maintained at a high figure.* It may suit the views of the speculators and monopolists to cry out *now* large crops! abundant crops! tremendous crops! bring down the price of wheat; and when they have purchased change their tune, sing out "great scarcity of breadstuffs!" obtain the highest prices and make fortunes on the labor of honest industry. But if the producer will attend to his own interest he will not be deceived by any artifice of the purchaser to reduce the price of wheat. The corn crop—and indeed all of the crops which depend for their growth on this season—

bids fair to be very large, being benefited by the drought of the last year, as I explained in the "Sun" a few weeks since; but this will not materially make up for the deficit in our wheat crop, as corn is mostly converted into pork and beef, or fed to horses, mules, &c., and with a large portion of our population it is but very little used as a breadstuff.

I furnish you, Mr. Editor, with the above conclusions, which, after mature deliberation, I have arrived at. When I wrote before, as to the wheat crop, I was threatened by anonymous letters from "meddling in what did not concern me," and likely I shall give offence to some by the above. This to me is a matter of the least consequence. The consciousness of an honest discharge of my duty is all the reward that I seek, and, as to threats for doing that duty, I hold them in no sort of valuation. There has been and is now an associated persistent effort to lessen the price of wheat, by exaggerated statements as to its quantity, and I feel fully justified in placing what I conceive to be the real facts in relation to it before the agricultural community. I have carefully sought out all means of reliable information, and the conclusions founded on it are at your disposal.

Very truly, &c.,

JAMES HIGGINS,
State Agricultural Chemist.

Comments on the above Letter.

That our readers may be enabled to see both sides of the question discussed in the foregoing communication, we copy the subjoined opposite views, presented in the Baltimore Patriot:

"We gave on Thursday an article from Professor James Higgins, dated 'Laboratory of the State Chemist, Exchange Building, Baltimore.' As this communication came to us in an official and authentic shape, and as the articles of Professor Higgins, holding the position he does relative to agricultural pursuits, must always attract general interest, we deem them of sufficient importance, not only for publication, but comment. It is presumable, at least, that he has given the subject much careful, unbiassed attention, that his position and sources of information are ample, and his scientific as well as practical knowledge must give him many advantages. Hence the importance that is likely to be attributed to what he says. We always gladly welcome the Professor to our columns. He writes, or ought to, upon subjects in which the great substantial agricultural community have an abiding interest. Saying this, however, we do not see the necessity of endorsing all that may appear over his signature. 'Doctors disagree,' so do chemists—occasionally editors. This is a prerogative of ours, also, and in the best nature imaginable, with perfect honesty of purpose, we beg leave not only to dissent from, but challenge some of the doctor's positions.

"He sets out with the broad assertion that we now have accounts from all parts of the country; that there is *no extra*, but a full crop of fine quality; that great damage has been done to wheat by recent rains; and yet it is all sufficiently gathered to show that this year's yield is not more than equal to that of last. These remarks he does not confine to Maryland, which we supposed was under his more immediate supervision, but to the whole country. Our friend appears to deal wholly in generalities, or random observations of a few, probably interested, who have communicated with him by letter. Dates, time, places, particulars, and substantial, argumentative facts are left out of the question. He infers, probably, that because a few croakers in Maryland may have depreciated the present wheat crop, it must be so; and that prices, consequently, are bound to rule high, that a foreign demand must continue, causing large exports.

"We hold that our own sources of information are fully equal to, if not surpassing, those of the State chemist. We have not only the advantage of letters from all parts of the United States, but peruse innumerable daily and weekly journals, published in almost every township and county of each State of the Union. So far as our observation has penetrated, these letters and papers, with an occasional exception, represent the wheat crop as abundant; in some States—Illinois, Ohio, Pennsylvania, Tennessee, Virginia, New York and Indiana, as unusually large; whilst in all of these grain-growing States last year, and throughout the entire country, it was unusually small. It is absurd, almost ridiculous, for any one at present to attempt even an approachable estimate of the grain crop. The nearest approximation sinks into conjecture, founded upon general practical observation, and this we have in accumulative testimony favor-

ing an abundant supply of superior quality. As, therefore, supply and demand in all things regulate the intrinsic equivalent of every article, so must it be with grain.

"Corn, by the Professor's own admission, is in unprecedented abundance; and if he has ever travelled in the South, or through the eastern section of Maryland, he will find that other animals than hogs are fond of it. The potato crop is in like manner immense, besides every other vegetable and fruit requisite to sustain life. These must of necessity be cheap, and therefore the large wheat crop can only command rates commensurate with the prices of these suitable and convenient substitutes. If corn is cheap, pork will be low; and if meat is had at reduced rates, other things must seek a comparative level. These things, like the immutable laws of trade, regulate themselves.

"That there will be a large foreign demand is mere assumption. The war in Europe has existed nearly two years, and at this present time neither flour nor grain can be safely exported there. The people engaged in this war, as a general thing, were unproductive. They had to be fed before it commenced, and must be after it ends. There are still enough left to fill agricultural pursuits, and fair promises are given of good crops abroad. Much, of course, depends upon future exigencies.

"We have seen several recent estimates of the present wheat crop, prepared doubtless with considerable care and from the best attainable data. The New York Courier and Enquirer puts it down at some sixty-five millions of bushels more than last year, and thinks this a moderate estimate. The Cincinnati Price Current, evidently wrong in its data, as it makes the crop of Maryland far below that of last year, which all well informed persons know is not the case, shows a surplus in all the States of about twenty millions of bushels. General observation, the same means of information upon which we are now obliged to rely, with almost unerring certainty, foretold an unusually light yield in our State last year. Upon the same hypothesis or concurring problematic testimony, no one can pretend to deny that the present crop is not greatly larger. What every body—excepting our friend, Professor Higgins, and a few others—says must have some reasonable foundation in truth. If an overwhelming majority cry out 'large crops!' 'abundant crops!' 'immense crops!' as the Professor admits, there is some cause for it beyond mere speculative motives.

"We would suggest to Professor Higgins that purchasers and consumers of grain, as of other commodities, are not all identical in the same interest. One day we find a large buyer endeavoring to buoy the market; the next, his policy is to depress it; and so it goes alternately year in and year out. It would be ungenerous, therefore, for agriculturists or producers to censure consumers for wishing to obtain an indispensable article at a moderate price. The fairest game is that at which two can play. Whilst we cheerfully sympathize with the farmer, and are glad at all times to see him prosper, yet there is a largely preponderating class, mere consumers, less independent—laborers, lawyers, doctors, merchants, mechanics, including State chemists and other professional men—whose well-being is not to be disregarded. Speculators would not be very severely censured if, by concerted action, they accommodate prices of such articles as are requisite in sustaining animal life to the wants and means of these people. But, as we have before said, there are two interests, diametrically opposite, in the science or art of speculation, which check each other, and generally effect a tolerably fair balance. We need, therefore, apprehend little danger on this score.

"Supply and demand are the great regulators. There is, in our judgment, a very large, abundant supply of wheat, whilst that of corn and oats is beyond all precedent. Rye is also plentiful. Potatoes are ten-fold. The earth teems with fruit and vegetation of every kind. With these cattle can be fed; meats must become cheaper, and a general tendency will be towards reduced prices; one affects the other, and all participate to a greater or less degree. We are gratified, in contemplating this subject, to see so many evidences of future abundance, ease, and prosperity.

"We entertain no fears for the farmer, believing he can foresee coming events with as keen an eye as others, and will sell his produce to the best advantage. It is not our province to dictate what he shall do, nor to impose uncalled for advice. We believe there is any immense crop, and those who obtain *even present prices* for their grain and other produce will lose nothing, but, on the other hand, do well."

WHAT IS THOUGHT OF THE REVIEW BY ITS SUBSCRIBERS AND THE PRESS.

We have not often referred to this subject, though it will no doubt be of interest to the friends of the work. Should time and space admit, we may hereafter give a few evidences from our correspondence and exchanges. We select a few items at random, which are of latest dates. It will be seen that our subscribers do not pay unwillingly—at least the larger part of them; would that there were no exceptions.

From the New Orleans Crescent.—The Review should have an extended circulation all over the South and the Union. It is a prominent feature in the world of magazine literature, and ranks with the proudest and most useful.

From the New Orleans Picayune.—The periodical, we perceive, has been materially increased in size, and is furnished with a proportionally increased variety of matter. The articles in this number are all of them on subjects of importance to the south, and cannot but prove of interest to readers of all classes. Of the style in which they are treated, it is unnecessary for us to say more than that it is of the same clearness and instructiveness which have raised the periodical to its present reputation.

From the New Orleans Delta.—Whilst this magazine presents in a strong light the rights and claims of the south, it manifests a laudable zeal and devotion to the improvement of agriculture, by keeping our planters duly informed of the progress and improvements in other parts of our country. We may mention that there are five different heads of the articles in this number, all of which are very ably handled, as indications of the judgment and tact with which the selections of the Review are made. These various topics are made the texts for a large fund of useful information and of many wise and valuable suggestions, which every southern gentleman is interested in reading and carefully digesting.

From a planter in Tensas Parish, Louisiana.—I have been pleased to see the prompt response of so many of your subscribers to your call for funds. Your journal I esteem invaluable to the southern planter; and I hope your subscription list may be greatly extended.

From a planter in Beaufort district, South Carolina.—Your several reminders of my indebtedness to your Review I believe have all been received; and I can only plead guilty to the implied charge of great negligence towards your useful and well conducted periodical. I do not know that I can better make amends than by sending you a year's subscription in advance of the charge you have now against me: you will therefore please receive an order on Charleston for \$15.

From a planter in Tallahassee, Florida.—As long as I live you may consider me a subscriber to your Review. I must have it; and I hope always to be punctual, for never was a laborer more worthy of his hire. The south should feel a pride in sustaining such a friend to her dearest interests as De Bow's Review has been and is.

From a planter in Colleton district, South Carolina.—Enclosed you will find ten dollars, the amount due for subscription to your valuable periodical. I am heartily ashamed of my negligence in delaying a remittance to this time. Your account was received with the last number, and I had brought it up in order to forward you the money from this post office, where your last communication reached me this evening.

From a planter in Virginia.—I assure you I would not do without your valuable Review for double the charge.

From a planter in Perry county, Georgia.—I feel mortified at the idea that after you have imparted to me so much instruction and gratification in your Review, I should have requited your labors so poorly as to withhold your dues, and subject you to the trouble of addressing me by letter. With me it has been nothing but negligence, and I feel ashamed of it. I ask forgiveness for the past, and promise to do better for the future. Permit me to make a solitary suggestion in relation to the Review. I have no doubt that you could contribute as much to the ulterior benefit and enlightenment of your subscribers by an article or articles, from your own pen or from some of your able and experienced contributors, upon the application of geology to agriculture. As chairman of the Committee on the State of the Republic, in the Senate of our last Legislature, I reported upon the memorial of the cotton-planting States, requesting the

“Empire State of the South” to organize a geological department. You can’t even imagine the humiliation I felt, as a native Georgian, proud of his State and of her greatness, that she should have been politely requested by her sisters (I might say daughters, to perform a duty to herself which she had blindly omitted for half a century. If I had a copy of my report at hand I would take the liberty of enclosing it to you. The report was rejected by that opposition which ignorance always makes to scientific advancement. Science, in this instance, adopting the elegant language of Mr. Babbage, in his “Decline of Science in England,” “was opposed because she was virtuous, dishonored because she was weak.” I assure you in conclusion, that you have not among your numerous subscribers one who feels more sensibly the merits of your work, or desires more earnestly its continued success and increased prosperity.

From a planter in Alabama.—The ten dollars are herewith sent, and I hope in the future not to forget my obligations as a southern man and a patriot to stand by you in your laudable efforts to promote the welfare of our sunny but down-trodden south.

From a merchant of Buffalo, New York.—Yours of the 20th ultimo was received to-day. Enclosed I send you fifteen dollars, on account of the Review, the receipt of which please acknowledge. I hope your subscribers may respond liberally and cheerfully.

From his Excellency, the Minister of Commerce, of France.—You were kind enough to transmit to me, by yours of the 2d instant, the four first numbers for 1855 of De Bow’s Review, published in the United States—I thank you very much for the same. I attach great importance to this work, and would be happy to receive its continuation; and you will oblige me to express on this occasion, with my acknowledgment to Mr. De Bow, the high interest felt by my department in his valuable labors.”

INTERESTING TO SEA-ISLAND PLANTERS.

We extract the following from a circular of W. S. Lawton & Co., of Charleston, South Carolina:

As the time for gathering long staple cotton is fast approaching, and desiring that you may get a fair remuneration for your labor, we will communicate some facts which, from our experience as planters, and of twenty years in selling long staple cotton for the planters of South Carolina, Georgia and Florida, will, we hope, benefit many of you. In the first place, in picking in your cotton you should, as speedily as possible after the bolls are opened, have the cotton gathered before the staple becomes dry, and from too much exposure to the atmosphere, have its strength impaired. When black seed cotton remains too long exposed in the fields, it loses its soft and silky appearance, by reason of the escape of its essential oil by exposure to the heat and rain. When it has been got out speedily after opening, it may be requisite to have it dried a few days before ginning, to prevent heating and injury to the seed. In order to do this to the best advantage, to retain its oleaginous appearance and strength of staple, it should be spread out in the shade and not exposed to the sun, as is usually the case with many planters who have just commenced planting that article, and who have been in the habit of planting the short staple or upland cotton. It is also too often the case that planters are compelled to keep their cotton exposed to the air longer than necessary, from the fact that they get it out by foot or other common roller gins, which do not clean the cotton sufficiently of the dirt, trash, and motes; hence they have to handle it after it is ginned out, to remove the motes and mashed seeds, and to switch it to get out the dirt, which gives it that stringy and rough appearance, and the length of time in doing all this exposes it so much to the air that its oleaginousness is almost completely taken out of it, besides great injury to the strength of the staple.

Now, to prevent all the above difficulties in getting out this article, there has been recently invented a gin which not only takes the seed from the cotton, but frees it from motes, trash, and dirt, all at the same time, without injury to the staple. The cotton has been sent to the factories which are working up the Sea Island cotton, and they pronounce it better for their work than cotton from any other Sea Island gins. These gins are made by Clemons, Brown, & Co., of Columbus, Ga., and are worth from \$110 to \$150 each, according to size. Those

§110 can gin out 400 pounds of lint per day, with one strong horse. The gins are strong, and easily managed by negroes, and not so apt to be put out of order as the common foot or roller gins, which go by steam or horse power.

Samples of the cotton can be seen at our office. For further particulars of these gins, apply to Clemons, Brown, & Co., Columbus, Ga., or ourselves.

THE NATIONAL OBSERVATORY.

Speaking of the National Observatory and of Lieutenant Maury's labors, a correspondent from Wharton, Texas, remarks:

I have looked in vain through your lucid exposé of the wonderful order and arrangement of the executive department of our government for a detailed statement of that complicate, and not to be appreciated by dollars and cents branch, the observatory, where the science of the greatest commercial nation on the globe is to be embodied and diffused.

Our empire is great, without parallel. We possess *mind* which can appreciate it, and make it available in placing us in the very first rank of the nations of the earth. To that observatory do I look for the noble aspirations which are to point the course and form the minds of our people for achieving their high destiny. What a weight of obligation rests upon Congress, in fostering, cherishing, and endowing with ample means, to make it the nucleus for the resort of genius, the spot on earth where, above all others, the student of nature will be provided with a peaceful asylum, a cordial, happy home, amongst kindred spirits, whose emulation would foster progress. The truly great and original mind now at its head would, if sustained by the legislature, make it all I have said, nay, more, the very focus of all knowledge. Government owes it to the nation so to constitute it.

NEW VARIETIES OF SUGAR CANE.

We extract the following from a letter received from a planter of Louisiana and shall present the subject in the proper quarter:

From a communication of the Hon. J. Balustier to the agricultural branch of the Patent Office, published in your last Review, I am reminded that in 1850 and 1851 I wrote several letters to the department urging them to procure several different varieties of the sugar cane and several other plants. I was assured by the Secretary of the Navy that the department would not lose sight of this interesting subject, and that orders had been given to the commander of the East India squadron to procure all the plants and fruits mentioned in my letter. All I have heard from them since is, that the sloop-of-war Marion had arrived in New York some time in July, 1852, with some rotten cane. If there has been anything received since that time I have not been informed; as you are connected with the department, no doubt you could be of great service to the planters of Louisiana in procuring a new variety of the sugar cane. It is of vast importance to the sugar interest; for several years the cane has decayed before planting, and for the last two years, on some plantations, the greatest portion of the cane has become rotten before planted. The sugar cane is no exception to the law of vegetable physiology, that plants propagated a great length of time from buds become feeble, and finally run out. I have been quite anxious to obtain the grain of the sugar cane from where it grows in its natural state and produces prolific seed. I should be pleased to obtain the *dioscorea japonica*, but do not know where to apply for it. Please to inform me.

[There are none of these (*dioscorea japonica*) left in the Patent Office, but a supply will be ordered soon.—Ed.]

AGRICULTURAL COLLEGE.

A State agricultural college is soon to be established in Michigan. The executive committee have purchased a section of land near Lansing, containing 676½ acres, at \$10,150, at \$15 per acre, for a farm school, and students will alternate between mental and manual labor.

NOTICES OF BOOKS.

1. *History of the Council of Trent. From the French of L. F. Bungener, author of the Priest and the Huguenot, etc. Edited from the second London edition, with a Summary of the Acts of the Council, by John McClintock, D. D. New York Harper & Bros.: 1855.* The American press just now teems with works relating to the great questions of Protestantism and Catholicism, which have an interest growing out of their unfortunate connexion with the politics of the day. To all theologians this volume is invaluable.

2. *Panama in 1855; an account of the Panama railroad, of the cities of Panama and Aspinwall, with sketches of life and character on the Isthmus, by Robert Tomes. New York; Harper & Bros.: 1855.* A volume handsomely illustrated, and abounding with amusing and instructive descriptions of scenery and travel.

3. *Art Hints—Architecture, Sculpture, and Painting; by James Jackson Jarves, author of History of the Sandwich Islands, etc., etc. Harper & Bros.: 1855.* The titles of the chapters of this work explain its most interesting contents: Art in relation to History; in relation to Matter and Spirit; Beauty, Utility, Ugliness, Taste; Schools of Art, Ancient and Modern; Art in relation to Artists; Great Products of Arts; Ages of Distinguished Artists, &c., &c.

4. *Cleve Hall; by the author of "Amy Herbert," "The Experience of Life," &c. New York; Appleton & Co. A new novel, by a popular and well appreciated author. The field of romance is wide, and the author has roamed over it with freedom.*

5. *Memoir of the Rev. Sydney Smith, by his daughter, Lady Holland, with a selection from his letters. Edited by Mrs. Austin. In 2 vols. New York; Harper & Bros.: 1855.* This book furnishes a curious record of a man of rare genius who has stamped his impress strongly upon the age in which he lived. He was a writer who met with no match in the keenness and pungency of his wit and satire; and his contributions to the Edinburgh Review gave it for many years the front rank in British periodical

literature. The volumes before us will be sought with avidity by the whole reading public.

6. *Waikna, or Adventures upon the Mosquito Shore, by Samuel A. Bard, with sixty illustrations. New York; Harper & Bros.* This little volume, with its fine illustrations and apt descriptions, will find many readers, as it touches upon almost a new and very inviting field of American exploration, the Mosquito coast. There are some valuable chapters upon the language, topography, soil, climate, and inhabitants of the country.

7. *Letters to the People on Health and Happiness; by Catharine E. Beecher. New York; Harper & Bros.: 1855.* The work is divided into five parts, to wit: Organs of the Human Body; the Laws of Health; Abuses of the bodily Organs; Evils resulting from such Abuses; Remedies for these Evils, etc.

8. *A Visit to the Camp before Sevastopol; by Richard C. McCormick, jr., of New York. Appleton & Co.: 1855.* The author describes minutely all that he sees in his visit. His maps and illustrations may be relied upon as entirely correct, and, if carefully studied, will greatly contribute to impart a complete understanding of the relative locations of the most important places mentioned, positions of the contending armies, and the general appearance of the surrounding country.

9. *Harpers' Picture Books for the Nursery; 3 vols., each complete in itself. By Jacob Abbott. New York; Harper & Bros.* The books are intended for very young children, and are appropriately illustrated.

10. *Trubner's Bibliographical Guide to American Literature.*

11. *A few Months in America. By James Robertson.*

These two works from the English press, sent us by their authors, must be postponed until our next issue.

12. *The Heiress of Houghton, or the Mother's Secret; by the author of Ravenscliffe. No. 199 of Harper's Library of Select Novels.*

LAW AND AGENCY NOTICE.

The undersigned has returned to the practice of his profession at Washington City and in New Orleans.

Business at Washington in the Supreme Court, Court of Claims, or in any of the Bureaux or Departments of the Government—Land, Pension, and Patent Offices—will be attended to by himself. Business for New Orleans will receive the attention of his law associate, V. H. Irv, Esq., of that city, and also of himself during a portion of the year. J. D. B. DE BOW.

WASHINGTON, August, 1855.

DE BOW'S REVIEW.

OCTOBER, 1855.

FREE NEGRODOM—THE MASTER AND THE SLAVE.*

If, as has been attempted to be shown by our author, that the free people of color have not been saved from the deepest degradation of condition among those who style themselves *par excellence* their friends; if they are, in the words of a most devoted abolitionist, "*rotting mentally and physically* in our cities;" if abolition of slavery has been followed wherever it has been attempted by ruin and social devastation; if the products of slave labor are never incorporated with the industry and business of the United States and of the world to amounts and with consequences that mock all calculation that cannot number the sands of the sea, what is to be done with this perplexing institution of slavery? Our author answers, as some of the wisest and most temperate answer, by morally *restraining and governing the power reposed in the master like every other human power*, as the power of husband over wife, parent over child, master over his free-born apprentice, and the power of political government over the subject. In no other way has Providence guarded the dearest and most important relations of social life. Not by municipal laws alone, even when they second the yearnings of the heart, not by avoiding all abuse and perversion of power, for abuse is necessarily incident to its possession, but the interests of life are guarded by both combined, the enlightened conscience, and humane and merciful laws.

Social condition and character cannot be formed at the beck and will of political reformers; manners in all states of society are stronger than laws, and constantly override them. The slaves of the West Indies, generally, have been transferred directly from the bosom of African barbarism to a barbarism of most oppressive labor, scarcely superior in happiness or the

*This article is in conclusion of those in the last number, entitled "Cotton is King," see pages 263, 308.

means of social improvement to the one they had left. The missionaries say that "the free colored people of Jamaica for nearly three hundred years were entirely without the gospel, and it gained a permanent footing among them only at a few points at their emancipation twenty years ago, so that when liberty reached them the great mass of the Africans in the British West Indies were heathen." (Note, page 149, and Rev. Mr. Phillippe, for twenty years a missionary in Jamaica, in his "Jamaica, its Past and Present Condition.") Our own colored race were, at their introduction into the British colonies two hundred and thirty years ago, in the same condition of heathenism, rife with all the superstitious ignorance of Fetiche worship, laboring "under the disadvantages of *hereditary heathenism* and *involuntary servitude*." The superiority of our negroes to their countrymen in the native wilds of Africa is established in the most incontrovertible manner by our colony of Liberia. There, in all the intercourse of the Afro-Americans with the natives, the mental and physical superiority of the former has been most signally established; they have raised themselves to an enviable attitude of mediators and arbiters in most of the disputes among the barbarian chiefs of the coast of Africa where they have settled. "The republic of Liberia has been conducted from infancy to independence almost wholly by *liberated slaves* and those who were born in the midst of slavery." (Note, page 154.) How comes this most remarkable result? Our author answers, most forcibly, "Slavery is not an element of human progress under which the mind necessarily becomes enlightened, but Christianity is the *primary* element of progress, and can elevate the savage, whether in bondage or freedom, if its principles are taught him in his youth." Both the West Indies and the United States began their system of slavery with savage men. "For three hundred years" the slaves of the former "were destitute of the gospel, and their barbarism was left to perpetuate itself. But in the United States the Africans were brought under the influence of Christianity on their first introduction," "and have continued to enjoy its teachings, in a greater or less degree, to the present moment. The disappearance from our colored people of the heathen condition of the human mind, the incapacity to comprehend religious truths, and its continued existence among those of Jamaica, can now be understood." "But while all this must be admitted of the colored people of Jamaica, it is not true of those of our own country, for long since they have cast off the heathenism of their fathers; and have become enlightened in a very encouraging degree. Hence it is that the colored people of the United States, both

bond and free, have made vastly greater progress than those of the British West Indies in the knowledge of moral duties and the requirements of the gospel." (Pages 148, 151.) Time, long time, and favorable culture are, then, essential to the improvement of the African race as well as any other. And these are to be obtained by the voluntary and cordial co-operation of the slaveholders with the other friends of the slave.

Nothing under our government is to be expected in favor of the slave by *abuse and vituperation of the master*. This may go far, as it has already done, to inflame the parties against one another, and, by the common tendency of the human mind, to disaffect the slaveholder against his assailants, and indispose him to adopt their projects. It will go farther, and by inevitable retaliation and irritated feeling will rivet the bonds of the slave tighter than the generous spirit of a Christian and republican people would naturally incline them, if unprovoked. The American slaveholder is no West India planter, subject to the prejudices, or, it may be, the caprices, of conventions and parliaments on this or on the other side of the Atlantic. He has been not only for one hundred and fifty years the constitutional and legal owner of his slaves, but he is more: he is their political master, enacting the laws which govern the acting of both bond and free. How infatuated, then, the course of our abolitionists who, so far from appealing, in Christian and patriotic tones, to the conscience and the judgment of the slaveholder, condemn him absolutely, and assume the peremptory authority of a master? Do they forget or disregard the paramount obligation of a fair and free social compact, joyfully entered into by all parties, slaveholders and non-slaveholders, at the time as a city of refuge, the salvation of an expiring republic? Do they despise the administration of this republic which, for sixty-four years, has excited the admiration of the world, and secured the greatest mass of social happiness on the earth? So much so has this been the case, that it has well been called "the last asylum of oppressed humanity." But while the opinion that slavery is *malum per se*, or absolute wickedness, incapable of any indulgence or extenuation, may be entertained by some whose worship of their *higher law* is so exclusive as to override all other moral principles, all reverence for national compacts, and respect for the lawful rights of fellow-countrymen, there is another party to this great social issue. There are some portions of this people quite as moral, as patriotic, and as gallant as their antagonists, who, while they deplore the existence of slavery, su bm

to the necessities of their involuntary social position, and endeavor to infuse into the dominion entailed by it all the mercy and consideration of which it is so largely susceptible; who, while they dread and most reasonably abhor the manumission of a degraded race, among themselves, still feel bound by all their duties to God and man to render their power productive of good and enjoyment to their slaves. They appeal to the principles which should regulate and govern all the forms of human power—the eternal principles of justice and right. They are as applicable to the relations of master and servant as they are to the other relations of life. There always has existed, and, I fear, ever will be, much abuse of power in all these relations; but it would be but feeble sense and bad logic that should maintain that these indispensable relations of society should be abolished, because they are and must be subject to abuse and perversion. This is at once to impeach the whole system of God's providence and the free responsible agency of man. Granted, for the sake of argument, that domestic slavery is intrinsically and absolutely wrong, and contrary to the rights of man, (as, in my soul, I believe,) still an enlightened and conscientious master may well hesitate to renounce this power, devolved upon him by the laws around him, till some provision shall be made to secure him and his country from the mischiefs and ills that have ever followed the unprepared manumission of masses of men. It is a pure question of self-preservation with the present generation. Is there anything fallacious or sophistical in this argument? Is power over a human being as a servant, even for life, essentially different in its obligations and duties from the power over a wife, a child, an apprentice, or a subject of political government? If, in some of these relations, the tenure of the power is less than the usual relation of master and slave, that does not affect the power itself, but its duration.

All peaceable attempts to regulate this moral power except by moral means, and not by artificial laws alone, must prove futile. It is contrary to the nature of man and the laws which govern his thoughts and his habits of action. How then is this direction to be given? Let the teachers of Christianity answer, and let them act towards our slaves as Jesus Christ and their primitive predecessors acted towards the slaves of the Roman empire. Let them act as succeeding generations have done towards the serfs of the middle ages of European history. Let them oppose sin and wickedness in all men, of all colors and conditions. Let them inculcate, after the example and precept of Jesus Christ, love and mercy

to all men, and leave the fruits of such opposition and such action to the Ruler of the Universe. Or, will the friends of the slave, by some grand heroic act, adopt an agreement of non-importation and non-consumption of slave products from all parts of the world? Are they ready to perform their respective parts in a grand act of secession from all modern commercial society? Will they retire into a circle of universal freedom of equality for the exclusive intercourse, protection, and enjoyment of the freemen, the pure and unsophisticated freemen, of the universe? How shall this expatriation be effected, and when shall this blessed union of these modern saints or American Quixotts take place? We wait patiently for the answer. But while this may be meditating, let me, in sober earnestness, conjure my fellow-countrymen laboring under the infatuation of abstract, unqualified abolition, to take their answer, with God for their counsellor and witness, into solemn consideration. It is, believe me, no light flitting matter of occasional agitation; it is pregnant with the hopes and interests of centuries for millions of your fellow-citizens, members equal to yourselves of the same glorious confederacy. Ought you to expect to change the habits of thought, the manners and laws of a people, free as yourselves, suddenly and violently? Are you ready for this anti-social object, to plunge this republic—the world's best hope of freedom—into the countless calamities of civil war and probable despotism? Would you submit to a social interference so repugnant to all the feelings and habits of the human mind at all alive to its rights? Should the planters of the south, under the influence of a similar infatuation, forbid your use of their cotton, their rice, sugar, and tobacco, and for that purpose, stop all intercourse with you directly and indirectly, would you acquiesce in the outrage? Would you not invoke, in such a case, the equal liberties of the confederacy and human nature in behalf of your violated rights? Yet these same southerners might well say that such measures were but retaliatory for your own unconstitutional and forcible resistance to the enjoyment of their solemnly covenanted rights. If trade and commerce have not lost their humanizing charms, for which the merchants, the sailors, and the fishermen of New England have for centuries labored and shed their blood, let them protect their customers of common friends, so a benefit enjoyed by either is more and more regarded as a benefit enjoyed by the whole; and in like manner an injury received by one is considered as an injury received by all. Their bond of sisterhood, formed in principle and cemented in interest, is likely to be as durable as the States which it encircles.

the south in their equal rights. Believe that the spirit which blazed in your own bosoms at Lexington and Bunker Hill, and burnt still brighter at Saratoga, equally animates the breasts of your fellow-citizens of the south. The men who, in much greater weakness than yourselves, defied the power of Great Britain at Fort Moultrie, Guilford Court House, and the Eutaw Springs, harbored in swamps with Sumpter and Marion, and bore the worst horrors, for years of foreign oppression, have left the same sacred spirit in the hearts of their descendants. The blood of liberty still courses warm and fresh through all your bosoms; believe no dishonor of one another, meditate no wrong. Return to the old peace and harmony that have consecrated the efforts of our common fathers, through centuries of trial and hardship, till they have reached our present national happiness and renown. Forget not that *Greene* was second but to *Washington*; and that both counselled and fought for our common liberty and independence. Let no extravagant sentiments of any description degrade the honors which the fathers of the republic have so gloriously achieved. Let Sparta keep her Helots, and Athens her freemen; but let Lacedæmonians and Athenians be both banded together, heart and hand, at the Thermopylæ and Marathon of America. Believe me, the controversy between the sections of the republic is rapidly approaching the dread alternative of *equal* and *peaceable* rights, or *civil war*.

To my slaveholding countrymen let me also address a few words of sincere and well-meant advice. Claim no divine right of master over slave; let it lie in the same grave, in which our author buries it, with the divine right of kings. Rest the maintenance of slavery on the actual expediency, the necessity, and constitutionality of your present involuntary position. Continue to infuse into your treatment of the inferior race, placed by Providence in your power and under your responsible care, every comfort and indulgence consistent with the relations of superiority and subordination, which, I know, must at all hazards be preserved. Cherish the noble and heavenly hope of elevating this degraded race, and, through them, the African world from loathsome barbarism and misery. Give Christian hope and principle the freest scope among your slaves, as is now extensively done. Thus the happiness of life here may be secured, and higher and eternal existence enjoyed by both master and slave. Prepare this unhappy race, by their probation in your service, to go forth free, and bless the land of their ancestors. Let this be the retribution of America to Africa for the hardships

INTERESTS OF THE SLAVE AND FREE STATES AND OF THE UNION.

The following articles are from an able pen, and are the offspring of a patriotism pure and high, and altogether of that sort which lived and breathed in the "Spirit of '76." We have read them over with interest and pleasure, having been furnished with a copy by a friend, and believe that every reader of the Review will be pleased with their republication. They were written for the Journal of Commerce, and are complimented in the National Intelligencer :

" There is no party, no association, political or reformist, no *ism*, to which he, the writer, does not attribute its share in the dissensions which are threatening to convert the blessings we have hitherto enjoyed under our admirable Constitution into curses worse than those that followed the public denial of a Supreme Being and the idolatrous worship of a prostitute Goddess of Reason in the bloody days of the French Revolution. There may, perhaps, be some expressions or reflections in the piece which we should have been pleased to see softened or modified, but we have preferred to let the writer use his own mode of argument rather than mutilate it by omission or alteration. It is evident he does not write to subserve the interests of any party, but the great body of patriots from all parties and all sections who regard it as their paramount obligation to support the Constitution and the Union. In this he has our hearty concurrence, and it is to aid him in that noble work of a good citizen that we ask the attention of our readers to his remarks."

It is needless for us to add that nothing in the articles, as published, can offend the party feelings of our subscribers at the south, who now, burying all disputes, are abreast battling against the great enemy of its institutions, and its security in the Union. It is in observance of the neutrality necessarily forced upon the Review in regard to political matters, that we omit the fifth article in the series, which is highly laudatory of Mr. Dallas, whom the author believes to have all the great requisites for the presidency, summed up by him at the close of the third. That eminent statesman and pure-minded patriot, for whom, in common with every southern man, we entertain the highest feelings of respect, will not consider us, therefore, invidious in the exclusion of this portion of the series.

THE INTERESTS OF THE SLAVE STATES.—No assertion can be better substantiated by indisputable testimony than that the political interests of the slave States are identical. The measure that would endanger the security of one, could not fail to be felt by all. Of this fact they are perfectly aware, and in view of their peculiar condition they are steadily engaged in tightening the ties which bind them together. They are determined to be prepared for any eventuality, which may be contemplated beyond their geographical limits, for impairing the compromises of the Constitution. Nor are their material or pecuniary interests in any respect hostile. On the contrary, they are in harmonious co-operation, and will be more indissolubly blended, as soon as their public works, under contract, and most of them in an advanced state, are completed. As common danger creates

In two, or at most in three years, from present indications, the capitals of the most widely separated slave States will be brought within seventy-five hours of each other, by railroad communication entirely through slave territory. At an earlier period will the Gulf of Mexico be reached in a considerably less time, from the Chesapeake Bay, while Charleston and Savannah will be within thirty-six hours' travel of Louisville and Memphis. Baltimore, Alexandria, Norfolk, Petersburg, and Richmond, will be directly connected, by locomotive velocity, with Vicksburg, Natchez, Mobile, Pensacola and New Orleans.

Upon the face of the globe there is not so stupendous a railway net-work as that in embryo, which is to embrace in its circle and ultimately develop every foot of southern soil. Texas and Florida, under its influences, will profit alike with Maryland and Delaware. Such mineral and other resources are to be unlocked in the long neglected mountains and valleys of Virginia, North Carolina, South Carolina, Georgia, Kentucky, and Tennessee, as will contribute in as great a degree to the prosperity of those States, and their southern sisters, as have the products of their luxuriant fields. Scientific discoveries have pointed out to them their hidden treasures, and arranged the manner of their realization. Richmond, from its unequalled facilities for manufacturing, and healthful location, may become the Manchester from which the south will derive its supplies of cotton and woollen apparel; and Knoxville, heretofore shut out from intercourse with the world, the Birmingham, which will furnish it with all that may be required of metallic articles. Its position is central and the centre at which the trains on all the great routes will meet. Its adjacent coal-fields, and iron, copper and lead mines, are numerous and inexhaustible.

The day of dependence upon the north by the south for markets, as for merchandize, is rapidly passing away. With it, social intercourse will diminish in a similar ratio. The incalculable value of the southern travel may be cut off to such an extent as to render it of but little profit. The more mountainous regions of the slave States abound with medicinal springs, of as varied qualities and curative virtues as the celebrated Spas of Germany. Many of them—some quite of the enslaved existence of her children. For the able, masterly, and temperate advocacy of these views, suffer me to press on the attention of all my fellow-countrymen, both north and south, the work which has now received this inadequate but most cordial review.

newly discovered—are surrounded by picturesque scenery, and are perpetually fanned, in the warm months, by invigorating, salubrious breezes. They are all becoming easy of access. Two years hence a railroad ride of twenty-four hours from tide-water will place the seeker after it at the one furthest off. They are destined to speedily be the most fascinating objects of summer attraction on this continent, to the fashionable and wealthy, as also to the “lame and afflicted.” Northern cities and watering places were never so prosperous as when thronged with southern visitors. Those visitors, in the main, they must prepare themselves to lose.

France has for some time entertained the notion of establishing a line of steamships from Bordeaux and Havre (those leaving the latter place to land at Southampton) to Norfolk. It is believed that our minister, Mr. Mason, has given the contemplated enterprise such encouragement as he could consistently with his duties, as he was known to be favorable to it before his appointment. It is probable that three or four vessels will be constructed for the purpose by the French government at an early day, and that the government of the United States will authorize the building of two or more, next winter, to run in correspondence with them. The Tehuantepec route will, not unlikely, have its termination on this side of the Gulf, at Pensacola. This would afford by far the most direct, as it would be the most expeditious ocean and land highway from all the capitals of Europe to the southern States, Cuba, Mexico, the Pacific ports, the Sandwich Islands, Japan, Australia, and China. The travel from London or Paris to the Pacific could be performed by this route in sixteen days, and to San Francisco in twenty-three or twenty-four, at the present speed of steamers and locomotives.

Thus we have merely glanced at a few—a very few—of the advantages which the south enjoys for exclusiveness of the north—advantages which are justly appreciated, and will be properly *exploited*, if the existing national sentiment shall be obliterated by the wild, immoral doctrines and doings of abolitionists, free-soilers, know-nothings, and liquor prohibitionists. With no such doctrines will the slave States ever fraternize. To no such governmental doings as they contemplate will they ever submit. The abolitionists would burn the houses over their heads; the free-soilers would deprive them of all influence in the national councils; the know-nothings would abrogate the most sacred principles for which their fathers unfurled the banner of revolution; and the liquor prohibitionists would place upon the federal code book a statute that would be more disgraceful to civilization than

the most despotic public act of the worst tyrant that ever reigned:

For the sake of the Union the south has yielded much, yielded long. It has no more sacrifices to make for its preservation. Its first great, almost fatal mistake was, its submission to the Missouri compromise. That measure was, to all intents and purposes, antagonistic to the spirit of the Constitution. The only question proper to be asked by Congress of a territory, when it presents itself for admission, all other requisitions being complied with, is, whether its reform of government is a republican one—in the sense of the Constitution of the United States. All legislation on the subject beyond this is a gross usurpation of power. Internationally we act, and have uniformly acted, upon the broad and just principle that every people has the right to choose its own form of government. Territories have a similar right, unless they encroach upon the “republican form” which the Constitution “guarantees to every State.”

The Constitution itself was the result of sectional and other compromises. If it were not such, it had never existed. Its essence and its excellence—that which is to perpetuate it if it be worth perpetuating—consists in this. Washington, as the President of the convention which adopted it, in submitting it to the States for ratification remarked, among other things:

“It is obviously impracticable in the federal government of these States to secure all rights of independent sovereignty to each, and yet provide for the interest and safety of all. Individuals entering into society must give up a share of liberty to preserve the rest. The magnitude of the sacrifice must depend as well on situation and circumstances as on the object to be obtained. It is, at all times, difficult to draw with precision the line between those rights which must be surrendered and those which may be reserved; and on the present occasion this difficulty was increased by a difference among the several States, as to their situation, extent, habits, and particular interests.

“In all our deliberations on this subject, we kept steadily in our view that which appears to us the greatest interest of every true American—the consolidation of our Union, in which is involved our prosperity, felicity, safety, perhaps our national existence. This important consideration, seriously and deeply impressed on our minds, led each State in the convention to be less rigid on points of inferior magnitude than might have been otherwise expected; and hence the Constitution which we now present is the result of a spirit of

amity and of that mutual deference and concession which the peculiarity of our political situation rendered indispensable."

Now, who have been the disturbers of this greatest of all compromises ever perfected by mankind, so touchingly described by the Father of his Country? Of this glorious Union—"the result of a spirit of amity," and of "mutual deference and concession?" To their imperishable honor, it will be recorded by history, whatever may be the future of distracted and divided America—not the slave States. They, alas! have been the victims—not the aggressors! One of those solemn, obligatory, Washingtonian compromises was, that "no person held to service or labor in one State, under the laws thereof, escaping into another, shall, in consequence of any law or regulation therein, be discharged from such service or labor, but shall be delivered up on claim of the party to whom such service or labor may be due." When a "higher law" dogma pronounced against the execution of this provision in several commonwealths, where was the "spirit of amity" and of "mutual deference and concession" which actuated the illustrious personages who gave us our national being? Departed, alas! and, in its departure, as far as the State by her own act can make it so, the instrument annulled.

The bad faith of the national government to the south, as we have already remarked, commenced in the instance of the admission of Missouri. It was resolutely persisted in, one way or another, until the repeal of that unrighteous measure. If it ever be revived, the slave States will have no alternative—will not pause to seek for one, but to absolve a connexion which is dangerous to their security, injurious to their interests, humiliating to their pride.

With all its safeguards the Constitution was reluctantly accepted by several of the slave States. By far the ablest debate which occurred upon its provisions was in the celebrated Virginia convention, where Mr. Madison, Mr. Monroe and Chief Justice Marshall were described as being only among their equals. Patrick Henry, William Grayson, and George Mason—three of the most brilliant minds that ever adorned any country—were inflexibly and energetically arrayed against its adoption. After many weeks' deliberation, and the employment of all the influence of Washington, then in the meridian of his popularity, in its behalf, it was only carried by a vote of 89 to 79. But never was a compact observed by a party to it with more scrupulous fidelity than Virginia has observed this. She has seen with anguish, in common with her other sisters, its provisions utterly disturbed—in

very mockery of her rights and interests—without rebelling. Hope whispered in their ears, that the north would reflect, and that with reflection, repentance and a joyous morrow would again smile upon the Union. But that repentance and the joyous morrow come not. The clouds continue to multiply and thicken, and the horizon bears a lowering, ill-omened aspect. Dissolution, under certain agencies, is assuming the magnitude in danger of almost unavoidable certainty.

We put no words into the mouth of the south. We cannot mistake, no rational man can mistake, its sentiments or its ulterior purposes, who has sojourned in it and seen as much of it as we have latterly. The north has sown the wind. In another number shall we indicate to it how it may yet avoid “reaping the whirlwind.”

THE INTERESTS OF THE FREE STATES.—Unlike the slave States, there would be no paramount cementing political interests, no common purpose to effect, no material welfare to advance, collectively, in the free States, were the Union to be divided. Those States might unite at first, though this is by no means certain; but they would assuredly sub-divide, from time to time, until there would be at least five distinct confederations. California, Oregon, and Washington, would most probably at the out-set form a separate government, and Utah and New Mexico another. Common security, rather than common interest, might influence the New England States, New York and Michigan, to form a league, which would be joined sooner or later, under the inevitable operations of the Marcy and Elgin treaty, by the adjacent British provinces. Pennsylvania and New Jersey would likely unite, and incline to the south. So would Ohio, Indiana, Illinois, Wisconsin, Iowa, and Minnesota. Thus, upon the ruins of the Constitution, five independent nations would usher themselves into existence in the free States, with what forms of government it is impossible to conjecture! But sub-divisions might continue, until every State would proclaim its sovereignty—proclaiming at the same time some His or Brigham Young its ruler! Causes for quarrels between them, imaginary or real, would become abundant for the gratification of their belligerent propensities. Real peace, there could be none; on the contrary, incessant and sanguinary wars. Not a day's respite to any of them, perhaps, from intestine commotions of one description or another. Nothing, in short, but an eternal state of political effervescence could be confidently relied upon. Every government would necessarily have its custom-houses, and be subjected to the annoyance and expense of maintaining them. They would necessarily be so numerous

as to form a sort of military *cordon* around each. Hundreds of thousands of new offices would thus be created, "to eat out the substance" of the laboring masses!

In most of the free States real estate has attained a value which it will perhaps be difficult for it to maintain under the most favorable circumstances, unless there be a vastly increased population. This will not occur. The know-nothing demonstrations, and delirious agitations throughout the north, will deter foreigners from emigrating to this country. They will not flee from one political persecution, rigid though it be, to see another in a distant land in a more objectionable form. They will

" — Rather bear those ills they have
" Than fly to others that they know not of."

Moreover, labor is in better request, and more remuneratingly compensated, in Europe, than it has been for ages. This results from the large amount of the effective part of it that we have been drawing off for the last few years, and the destruction of industrial life which has ensued and is ensuing from the war in the east. The only augmentation, therefore, of population which the free States can reasonably expect will be confined to the natural one. This is ever slow, and may be more than counterbalanced, henceforth, by emigration from the older communities to new States and territories. Without an increase of laboring inhabitants, a diminution in the value of the property of the north, and of the receipts of business men, is inevitable. To use an expression current on 'change, both property and business operations have been "over-bulled." This has resulted from an anticipation of progressive demand—that the future ratio of augmentation was to be calculated by the past. Delusive measurement.

If the Union were to be divided, and commercial and travelling intercourse suspended by the south with the north, every free soil estate, every city and town located on free soil, would immediately depreciate in value from ten to fifty per centum, according to location. Therefore, in a pecuniary aspect, the catastrophe would be the most blighting one in the history of civilization.

How totally different the condition of the south. Neither politically nor pecuniarily would it suffer, if it were impelled to the sad alternative of announcing its separation, and proclaiming to the world its independence. In the first place, as we have heretofore shown, there is the bond, an inseverable one, of slavery to hold it together, strengthened by entirely unconflicting, congenial, material interests. It must be understood that southern property of no description bears an

inflated value. In the main it has not been elevated to a price it would not sustain in any emergency. A system of railroads was necessary to its development, and that system, as practically useful as expanded, is only beginning to enfold its multifarious advantages. It is approximating from embryo to reality, bringing with it its concomitant blessings, without extravagant pretensions. Hence, come what may, the wealth and well-being of the slave States is more sure to experience improvement than deterioration.

Again: the south has been burdened with an unequal taxation for the support of the federal government, which has been a source of thrift to the north, from which it would be measurably relieved. For example, from 1791 till 1845 the principal receipts of revenue at the custom-houses of the United States amounted to \$927,050,097, of which the slave States paid \$711,200,000, and the free States \$215,850,097. We will take a period of four years, from 1833 to 1837, and the figures of Mr. Woodbury, to explain in what number the public money is expended relatively in the two sections. The free States received \$65,000,000, and the slave States only \$32,000,000, while the latter contributed \$90,000,000 to the treasury, and the former but \$17,500,000. Therefore, as respects increased taxation, the south would have nothing to apprehend in the formation and support of a new government of its own. Adhering to and adopting anew our present form, with which it is perfectly satisfied when honestly administered, and which is peculiarly suited to itself on account of the reliable stability of character and fixed purpose of its citizens, its annual public expenditures would not exceed half the amount which it pays at present into the national treasury.

But the north must be undeceived upon another point of vast, we may say of primary, importance. With nations, as with individuals, particularly with old and mercenary ones, self-interest is the predominating and actuating consideration. The north supposes—it may have what it conceives good reasons for so supposing—that Great Britain desires, as a measure of humanity, the abolition of slavery in the United States. Great Britain herself may imagine she does, because in the existing condition of relations on this continent it is her interest to imagine thus. But if she do, she is deplorably deficient in the most difficult and incomprehensible of all knowledge, that of knowing one's self. Let the south but once declare its independence of the north, and she would joyously approach, and exclaim to it at the top of her voice: "Come, give us your hand. The balance of power in the western hemisphere no longer excites our alarm. In the

division which has been accomplished our schemes have all been consummated. Our interests are identical, and can be made reciprocally beneficial. Your institution of slavery is indispensable to the salutary workings of our system of political economy! We cannot get along without your cotton wool for our manufactures, your tobacco for revenue, your rice and other surplus grain for food. We will help you to Cuba in order to consolidate your more perfect prosperity and geographical security, and, if you desire it, form an alliance, offensive and defensive, with you."

Similar influences would doubtless operate with France. Nine-tenths at least of her importations from the United States are of southern origin, while the principal consumption of her manufactories and vineyards, chiefly of a luxurious nature, is confined to the same section. Moreover, she is well enough informed to perceive that she has nothing to fear beyond Mason and Dixon's line from the enactment of prohibitory liquor laws. Southerners are incapable of committing such stupendous absurdities; such outrages upon individual liberty. Between the north and none of the powers of Europe is there a fraternizing tie of material interest. They all want markets for their surplus manufactures, many of which are of a competing description.

Under all the circumstances of the case, it seems to us that the north may not improperly be compared to a reckless, desperate man, sitting with a lighted cigar in his mouth over an open barrel of gunpowder. It is either regardless of danger or unconscious of its existence. It has everything to lose, nothing to gain, as we have concisely explained, in forcing the south to pronounce an everlasting separation; and yet it is hastening, unknowingly we believe to those most interested, the event, by countenancing, if not encouraging, unprincipled aspiring agitators.

The slave States, depend upon it, will not submit to another flagrant encroachment upon the compromises of the Constitution. This fact we wish to impress upon the public mind. They are as silent, as they are of perfect accord, in their resolution to resist, unto a united withdrawal, the restoration of the Missouri compromise, the repeal of the fugitive slave law, or the rejection of Kansas as a slave State, should that Territory present its constitution as such. Upon the north, then, the responsibility will forever rest, if it makes the terrific issue, involved in either of those measures, of having given the impulse to the death-knell of the Union.

Descend to the earth, spirits of Franklin, Hancock, the Adamses, Hamilton, and those of the host of other northern

inflexible patriots who have passed away, and save the blind, infatuated inheritors of your glory from such a degradation!

There is yet time for sufficient reflection before the last fatal step be taken; and if the north is not more fallen than we conceive to be the case, reflection may bring with it hesitation, and hesitation ultimate security. All sensible, all orderly, all patriotic men, must agree in the opinion that the period for a cessation of gamboling and rioting in the wild political sophisms and demoralizing doctrines, which have assumed such a frightful attitude, has at length arrived. If things continue as they are, miracles alone can save the free States from ruin. If they grow worse, they are hopelessly lost. Abolitionism, free-soilism, know-nothingism, liquor prohibitionism, are of a kindred character, tending to the same end. They are alike in deadly array against the spirit of the wise provisions of the Constitution, baneful to the welfare of the State, poisonous to the body politic.

THE DUTY OF THE UNITED STATES.—The generation of citizens of the United States that should be so regardless of its duty as to divide the Union, would merit the execrations of posterity, down to the period when it shall be pronounced there is an end to time. Worthless, mercenary, mean, will we indeed be, if for any consideration, real or illusory, we are influenced to destroy a system of government which has imparted, and is imparting, so many blessings to mankind. Better, far better, were it for us, if we have no nobler aims, no higher destiny to accomplish, than to annihilate the magnificent edifice of liberty, which cost so much precious blood, toil, and treasure to establish and maintain, that the ignorance of the wild child of the forest had been ours. Alas! if the Union fails in our times, it will be the result of political vice more than a want of enlightenment in government duties. No generation has, perhaps, been better informed as to the intent and purpose of the Constitution and its compromises than our own of this day. And it is a deplorable fact, that in the States where book-learning is the most general and the most perfect, schemes which, if carried out, would end in subversion, are most cherished and disseminated. Education, in certain localities, instead of producing and maturing patriots, seems to have been prolific in the yield of traitors and conspirators, as far as relates to what would be the practical workings of their peculiar views. Duty to the State, when the State is founded in justice and administered in integrity, is as imperative a one as the citizen has to perform to contemporaries and posterity. In this republic, where each citizen is a part of the State, the duty is more

obligatory than in any other. Its proper performance can never conflict with that due to the Almighty. The two are separate and distinct, and in natural harmony in their relations. An overpowering voice was once heard uttering in sublime accents—"Render unto Cæsar the things that are Cæsar's and unto God the things that are God's." No higher law observances were demanded. It has been left for the wiseacres of our own country and age to make the discovery that temporal or constitutional law, in enlightened nations, is subordinate to natural or higher law. The Pope never desired more power than this, prior to the Reformation, for the commission of the worst of crimes. The blindest bigotry could originate nothing more startling. If it were to become a recognized principle, there could be neither political nor social morality anywhere in the circle of its operations. Anarchy would be its immediate offspring, and the world rendered

"A mighty maze, and all without a plan."

Transcendentalism in politics would speedily overthrow legislative law, as in religion it would divine law.

Our wonderful national growth, our continued and enlarged well-being, is the result of the happy influence of law upon our citizens. They have been from the first, and, we believe, are disposed to ever be—with comparatively few exceptions—a strictly law-abiding population. They have occasionally been deluded—thousands of them are now deluded—by demagogues and the mischievous doctrines which they promulgate; but we shall not despair of their uncompromising devotion to the Constitution when they discover, as they assuredly will soon, that its provisions are endangered by their leaders.

It is the duty of the United States, as far as possible, so to administer the national government as to give no just cause of dissatisfaction to any citizen. Therefore, it is the part of wisdom that legislation should be within the limits, never going beyond them, of the constitutional guards to the States. Where doubt exists on any question, action should be invariably declined. Any excess of power not distinctly authorized is as much an usurpation in a republic as in a monarchy—dangerous in the extreme, engendering discontent, and impairing loyalty.

Every public measure should stand exclusively upon its own merits. In legislation, that which cannot triumph except upon the "log-rolling," or help me and I will help you, principle, is undeserving a place upon the statute book. Nothing was ever worth achieving, officially or privately,

that was achieved by the employment of unfair means. This statement, we venture to assert, would be endorsed, if their sentiments on the subject could be ascertained, by all political scheme-contrivers and manoeuvrers who have out-lived their ephemeral fame, and by every adventurer and *chevalier d'industrie*, who has had recourse to dishonest artifices for the purposes of gain. Let the rising youth bear this steadily in mind; and let his first study, when he attains the years of manhood, be the Constitution—making it ever afterwards his guide and his undeviating rule. Many members of Congress, and other officials who have solemnly sworn to support its provisions, in all probability never understood them thoroughly. Hence the danger, in a great degree, to which the Union has been subjected from time to time. The representatives of the States and of the people should ever remember that they have national as well as public local duties to perform, and that they can be discharged in no manner more effective than by guarding against any, the slightest, encroachment, upon the great compact which makes us one people. As long as that is preserved in pristine purity, every State and district in the republic may repose in perfect security—increasing in all rational enjoyments that render life delightful.

For the first position within the republic's gift too careful a discrimination cannot be observed in the selection of the individual. *Principia, non homines* is a motto admirable within itself; but it is measurably valueless, unless in its administration it have men of ample capacity and towering character to sustain principle. The officer, as much as the office, ought to command, particularly in the instance of President, unqualified universal respect. Without enjoying such consideration, his duties cannot be otherwise than laborious, difficult, and perplexing in the extreme, from the day of his inauguration.

He should be the superior, and conscious of the fact himself, of any of his cabinet ministers, even though they were chosen from the first personages of the Union. He should possess unyielding integrity, an accomplished education, experience in governmental affairs, eminent discretion, sound judgment, equanimity of temper, resolution, firmness, frankness, industry, and a good physical constitution. He should be by association and by principle a gentleman—a gentleman in that sense which would preclude him from doing any other than a virtuous private act, and, therefore, render him incapable of committing, knowingly, a wrong official one. Not the least of all, he should be an uncompromising constitutionalist—his past life, in that respect, having been a reliable

pledge to what his future would be—thus affording an insurmountable barrier to the success of any of the political schemers, charlatans, and disorganizers who threaten our ruin.

We can see in our imagination the countenance of the considerate, true patriot, as he peruses this—whether he resides on free or slave soil—brightening, and his eye sparkling with joy, eagerly inquiring, can such a man be found for next President? To the inquiry we are not prepared just now to respond. But let those who, like ourselves, sincerely believe, (and we trust their number is legion,) that the perpetuity, glory, and welfare of the Union require the services of one who comes up to the standard we have pictured, unite with us in searching for him. If he be found, and we believe he could, why should he not be hailed with acclamation, and mere partisan wire pullers—who rule through conventions and quarrel for and over “flesh pots” after elections, be forced to accept and proclaim him? Let us seek honestly and seek diligently for an object upon which so much depends. We shall in a subsequent number give the result of our own inquiries on the subject. In every aspect of the case, in which our destiny is involved, the next presidential election will be of incomparably more importance than was any one that has occurred in our history.

LAW AND LAWYERS.—BY THE EDITOR.

No. II.

ENGLISH COMMON LAW—TRIAL BY JURY—CHARACTER OF LAWYERS.

To all the perfection of the civil law add the element of liberty, the improvements of more advanced civilization, the teachings of a pure religion, the wisdom and experience of many centuries, and you have some idea of the perfection to which the science of law has advanced in England. What Sir Edward Coke says of the Parliament of England may, without hesitation, be applied to its jurisprudence: *Si spectes antiquitatem, est vetustissima; si dignitatem, est honoratissima; si jurisdictionem, est capassima; and, to account for its origin and growth, Littleton's quaint derivation of the law of hotchpot, “wherein is not put one thing alone, but one thing with another,” will suffice.*

When we reflect from how many independent and often conflicting sources this vast and comprehensive system has been derived, the wonder is that so many jarring elements could ever be combined into a perfect whole, wherein no-

thing valuable has been lost. Not alone from native lips have the highest eulogiums been pronounced—foreigners, who have taken the pains or have had the opportunity to examine, have expressed themselves in language of unhesitating and unmeasured praise. If there yet remain a few excrescences to mar those fair proportions, it is but the common fate to which everything human is subject.

Of what, then, does English law consist? Let us hurriedly consider its elements. I. The common law presents itself with its various definitions, "common sense," "enlightened experience," "wisdom of ages," "worn-out statutes," &c. This is none other than a collection of rules that have obtained, time out of mind, in the administration of justice; with no higher sanction than prescription, no other repository than the writings of sages learned in the profession, and reports of adjudged cases. Its antiquity may be clearly traced up to the Saxon times, and, if certain writers are to be credited, considerably further. The free and hardy spirit of our fathers could never abide any encroachments upon it. They wrested from King John a confirmation of its privileges; and it is even said that the laws of Edward the Confessor, of which so much is read in early English history, and which won so much favor to the sovereigns consenting to observe them, were nothing more than a compilation of these ancient customs, first made by Alfred, and afterwards completed by the Confessor. II. The statute laws, and these divisions taken together, the *lex scripta* and *lex non scripta* comprise the whole. If we note the great changes through which England has passed, it will easily be observed how foreign accretions have been made to her civil polity. First, we have a collection of barbarous tribes under the denomination of Britons; second, a Roman province; third, a Saxon invasion and amalgamation; fourth, a Danish irruption; fifth, a Norman conquest and establishment. Now, is it not natural, in the formation of law, as in the formation of language, to expect wide traces of all these mutations? The Briton had the dark superstitions of his druids; the Roman brought to his northern dependency that system which had thrived so well on the banks of the Tiber; the Saxon, his bold and free nature, which scorned all restraint; and the blighting footstep of the Norman brought feuds and slavery. The idea of conquest supposes much—new institutions, new maxims, new principles, new laws. Hence that bitter contest between the invader and the invaded—that radical and conservative warfare—that struggle for existence on the one hand, and

supremacy on the other—that ceaseless struggle. With the people that he despised, the Norman would even have blotted out their very language. It was not sufficient to work his system of feuds into the heart of the nation—he must maintain it there; he must deduce its most servile consequences. The system remained—no arm of power could eradicate it. Centuries passed away—new principles were developed—new lights shown—new efforts were stimulated; it fell at last, but furnishes, even to this day, the key to mysteries which were otherwise inexplicable.

With the administration of English law two species of courts are entrusted; the one with, the other without, the intervention of a jury. Of the former, the common pleas and king's bench are examples; of the latter, the chancery or equity. The chancery court presents an anomaly to the student of English law. It is as antique, at least, as the times of Henry III, and has from thence made gradual encroachments upon the sphere of the common law. These encroachments have excited, at times, no little uneasiness and dissatisfaction among the people, ever jealous of the prerogative of their "twelve men," and have been met by a spirit of sturdy opposition on the part of the earlier judges. This dispute, which was carried on with great vigor, and lasted many years, commenced with Sir Edward Coke, chief justice of the common pleas, and Lord Chancellor Ellesmere. Of the peculiar nature of chancery foreigners have had very confused notions; and Mr. Justice Story has shown that even native writers, learned in the law, have strangely erred. That it is ordained to supply, and not subvert, the law—that it acts *ex æquo et bono*, and is administered at the discretion* of the chancellor, which discretion is said to be a legal discretion—that it differs from all other courts in the modes of trial, proof, and relief—that it extends to numerous cases wherein the law, by reason of its generality, is deficient—and, in fine, that it reaches to all cases of rights recognized and acknowledged by the municipal jurisprudence, to which a plain, adequate, and complete remedy cannot be addressed at common law—are descriptions with which one who is not a lawyer must be satisfied, and one who is a lawyer, unless we are much mistaken, after examin-

* This drew forth the well known reproof of Mr. Selden: "For law we have a measure, and we know what to trust to; equity is according to the conscience of him who is chancellor; and as that is larger or narrower, so is equity. 'Tis all one as if they should make the standard for the measure the chancellor's foot. What an uncertain measure this would be! One chancellor has a long foot, another a short foot, a third an indifferent foot. It is the same thing with the chancellor's conscience."

ing all the books upon the subject, will find a confusion of ideas still existing in his mind. The truth is, it is easier to know what equity does than to know why it does it; and for our own parts, we have never yet seen so clearly why a great part of its business might not, with great propriety, be entrusted to the ordinary courts. But we are on tender ground.

The important part occupied by the jury in the English juridical system entitles it to an extended notice in this place. No Englishman can feel other than a just pride when he considers the distinctive character which it has given to the administration of justice in his country. To the Greeks and Romans it was an institution unknown; and it has gained but partial admission into any of the countries on the continent of Europe, which have been formed upon the basis of the Roman law. The trial by jury has been esteemed the bulwark of British liberty, and its guarantee formed one of the most important stipulations of *Magna Charta*. All the wealth, honor, liberty, life of the subject, hangs upon its determinations. From its honesty and enlightenment everything may be hoped; from its corruption everything despaired. Cavilling objectors have found much in it to censure, but the enlightened experience and wisdom of many centuries have determined its place among the best, the wisest, and most perfect, of human institutions, adapted admirably to the purposes to which it is applied. "The whole machinery of the State," says one, "king, lords, and commons, all the apparatus of the system, and its varied workings, end simply in bringing twelve good men into the box." If we trace for its origin, we must be lost in the most remote antiquity. It formed a part of the policy of those northern tribes which overran Europe, and traces of it are found wherever they left their impress. These hardy emigrants from the *officina humani generis* had notions of liberty too stern and elevated to condescend to any other judgment than that of their peers. It was then, as it was long afterwards, *Nullus liber homo, aliquo modo destruat, nisi per legale iudicium parium suorum*. When the Saxons were introduced into England, it is likely they brought this institution with them, if they did not find it there as some suppose, or were not indebted to Alfred the Great for its establishment. Certain, in the time of Ethelred, it is mentioned as no novelty. Down to the present day, it has ever maintained its character and dignity, even in the most troubled times. Its sphere has been respectively innovated upon by the Norman trial by battle—the courts of High

Commission, Star Chamber, and Chancery; but it has proved too strong for all of them. Formerly, the heaviest punishment, in the nature of a "writ of attaint of false verdict," was suspended over the jurors' heads; if they flinched, it fell. The consequences of this *writ* were direful in the extreme; its victim was scarcely considered a human being; he was hooted at, execrated, hunted down; he lost every right and every privilege—even his family were infamous; in an instant, in the twinkling of an eye, he was transformed into

"— a monster of such hideous mien,
That to be hated needs but to be seen."

But a writ of such questionable propriety was seldom used, and has long ceased even to be named. If anything can be said in its defence, it must be found in the nature of the jury; in the earlier times it had vastly more power than now. Its members came from the county in which the case originated, and their verdict was founded upon their own personal knowledge, without the examination of witnesses. The writ of attaint might have been needed then, not afterwards.

Every one conversant with English history must remember the great efforts which were made at one time to undermine the power of the jury, and bring it down crouching at the feet of the court. Lord Mansfield led the van, and was a host in himself; Mr. Justice Buller was behind him, full of admiration.* Lord Hardwicke was looked up to with veneration, and other great judges were not wanting. We allude to the attempt which was made to wrest away from the jury, in the question of libel, the consideration of *intent*, and confine them simply to the *fact* of publication. The most distinguished lawyers of the age, backed by the House of Commons and people, took the alarm and rushed to the conflict. Then was there a war of giants. Mansfield was violent, reckless, but great. Junius, behind the scenes, was hurling thunderbolts. Mr. Fox's artillery commanded the House of Commons. The voice of the nation fixed at last the seal of its condemnation on the odious heresy, and the jury was safe. During this famous controversy, so daring was Lord Mansfield in support of his opinions, that he is accused on one occasion of having overleapt the boundary of truth, and sullied his otherwise bright reputation. In

* Lord Mansfield was even then, at the head of the king's bench, introducing those innovations, * * * which, by his own account of it, threw Mr. Justice Buller into a perfect ecstasy of wonder at the depth, the comprehensiveness, and the acumen, of that powerful and ruling understanding.—South. Rev. No. 3, Art. III., by Mr. Legare.

referring to a popular ballad of the times, of Lord Hardwicke—

“For Sir Philip well knows that his inuendoes
Will serve him no longer in verse or in prose;
For twelve honest men have decided the cause,
Who are judges of fact as well as of laws:”

to suit his own purposes, the learned judge made the last line read, at the expense of harmony as well as truth:

“*Who are judges of fact, but not judges of laws.*”

In the United States, by virtue of a common origin, the English law has been almost universally adopted—the exceptions being found in those cases where a conflict exists between the peculiar institutions of the two countries.—During the colonial relation, the Parliament of England, as of course, had the same sovereignty on both sides of the water. When that relation was dissolved, and the thirteen American States formed together an independent member of the family of nations, English and American law began to diverge. The era of the Revolution is the point of divergence. English statutes, before that period, if they ever were applicable to this country, and have not been repealed, are declaratory of the law now. Since then it has been customary to re-enact here such statutes of the English Parliament as seemed deserving of highest favor, and calculated to give increased efficacy to the administration of justice. What was common law in England in 1776 is common law in this country now, unless altered by statute. English contemporary reports of adjudged cases, and the writings of their sages in the profession, are consulted among us with as much zest as ever, and admitted to as high favor in our courts. With all the enmity we encourage against England—all the rivalry that exists between the nations—there has yet been exhibited, on our part, no indisposition to admire her in those points where she is truly admirable; we admire and imitate.

Under a constitution such as ours, where each State is a sovereignty, and, taken together, all the States, for certain purposes only, constitute a unit, conflicting jurisprudence would naturally be expected; but the common origin of the States, and the extent to which they all draw upon a common source, will always prevent the angle of divergence from becoming very great—the single State of Louisiana forming an exception, where the roots of the civil law have struck down so deeply, and have taken so firm a hold, that the growth of the common law has been retarded. When all the States are acting together as a unit, they acknowledge a

body of law bearing with equal force upon all, and administered in courts of a peculiar nature. These courts, whether district, circuit, or supreme, have jurisdiction co-extensive with the whole country.

Having now dwelt so long upon law, which may not have sufficient interest to keep alive attention, it is time to turn to that class of men who have, in all ages, presided over its administration, who have been its repositories, its priests, its oracles—lawyers. If there be a science of law, and if it have its deep and profound learning, to expect a general understanding of it would be an absurdity. To be sure, there is something paradoxical in the idea of men being governed by ordinances with which they have no acquaintance; and yet, how is it possible that they can have such an acquaintance without devoting much of their lives to its study. For this, how few have the time, if they have the capacity. In view of the law maxim, *ignorantia legis excusat meminem*, taken abstractly, does not Caligula's custom of writing decrees in the smallest possible character, and posting them up in the highest places, lose much of its absurdity? Men, whose researches have never extended into this field, think it remarkable that so many difficulties should exist, so much complexness, so much doubt, and so vast an accumulation of learning, when the principles of justice are so few and obvious. They think that, between man and man, the duties and obligations are of so limited a nature and so easily understood, that all the rules required to govern them might be comprised in the shortest space. These opinions are common, and it is equally common for those ever ready to carp at lawyers to charge upon them all the difficulties in law. For ourselves, whilst we admit that simplicity and conciseness are much to be desired, that they conduce to the perfection of the system, and that the bold hand of the reformer might often be judiciously extended, we cannot, after looking at society as it is organized at the present day, after regarding its minute divisions, and contemplating the extensive, varied, and conflicting interests that rise up and place themselves under its protection, suppose for an instant that anything but a vast accumulation of law will result with the profoundest learning. In a simple state of society a few general rules may suffice, but, as the state grows, a body of jurisprudence will grow up with it in the same proportion. The number of independent adjudicated points in the English law have been estimated at over one million, the development of which must occupy no inconsiderable libraries. It is easier to propose than to carry

out reforms, and when any very extraordinary simplification has been aimed at, the effect has generally been a failure. The rules of law, as now established, have been established for their wisdom, and, although that wisdom may not be discovered always at a glance, or even upon study, it has been frequently manifest when there has been any innovation. It is seriously questioned, by Chancellor Kent, whether anything has been gained by the New York Revised Statutes, which promised so much in the inroads they made upon the cumbrous forms of the common law, and we have heard that a distinguished statesman of South Carolina, (Mr. McDuffie,) having effected something of a similar nature in the legislature, remarked afterwards, that, if God would forgive him for this offence, he would never be guilty of it again.

The profession of the law owes its origin and its importance to these facts. But a very small portion of society could be expected to interest themselves very much in the study and understanding of the laws by which they are governed. There must be a powerful motive to urge men upon this study—the interest which they have in it, from being subject to its control, has never been found sufficiently strong. We note it every day, in the little knowledge of law that exists out of the profession, in the offences ignorantly committed—in the mistakes made by hoary locks in what legal men would term the plainest matters of law. Ambition and emolument are the only moving impulses, and under their influence the highest achievements will be made. Open the wealth, honors, and distinctions of the State before any set of men, and you will have no want of candidates for favor. True, motives of this kind are not the most elevated, but they exist. The honors and dignities held out to the legal profession, in particular, grows out of the absolute necessity for such a profession, and the important part that it plays in conducting the whole operations of society. Hence we find the highest and most honorable mention made of it in every age—we find public counsels filled from its members, and skill acquired in interpreting, ably exercised in enacting law. The bar has been the road to the bench, and the bench to a wide and commanding influence. If we speak of the necessity for such a profession, the reasons are various. In the management of all the important points connected with an intricate case much theoretical and practical skill is necessary, which would be vainly looked for in the parties interested. The rights of the question are often involved in so much obscurity, and the conflicting evidences

are sometimes so great, that the highest powers of mind, combined with patience, industry, and unremitting application, are required to sift out truth from the heterogeneous mass and hold it up in its naked simplicity. True it is, that the community has not always professed to see so clearly as it ought the need of an enlightened, elevated profession, to whom the administration of the laws is to be referred—a profession whose interest, honor, and reputation, incline them to vindicate the sanctity and authority of law, as well as the rights and privileges of those they represent. Elevate the character of lawyers, and you purify the channels of justice—you distribute its clear waters uninterrupted through all the divisions of society. Depress that character—the streams stagnate, throw up their pollutions to the surface, and carry death in their poisonous exhalations. You can only elevate the profession by making higher requisitions upon those who are candidates for its honors. You, by this means, diminish the number of applicants and raise the standard to a higher grade.

The plan now pursued by most of the State in making lawyers is on a par with the labor-saving machinery of the age; the result has been multiplication and deterioration—an overstock of pretenders to legal erudition, who have never aimed higher than to glean a little here and there from Blackstone and Kent, in some miserable abridgement. Admirable examples of ignorance, conceit, and audacity! Standing committees of reproach! Each of the learned professions in this country groan under these inflictions, the law not among the least. It would throw out of their wits some of our learned tyros to submit them to the English ordeal, confine them six or eight years in attendance at an attorney's office, or in going through all the routine of study, exercise, and labor, at the inns of court, and then call them reluctantly to the bar. And yet what has been the result of this system? Has it conflicted anything with the interests of society—with the people's rights? Or has it not fostered into being one of the most learned and celebrated bodies of lawyers that the world has ever known?

In some of the New England States, the legislature and courts, out of a spirit of accommodation, and in deference to the misnamed popular rights, allow any man at pleasure to plead his own cause—thus exhibiting the low regard they entertain for anything like a dignified profession; for we would put the question, can a custom like this have any other effect than to remove all inducement from those who might otherwise bestow their time, talent, and energies,

upon the legal science? Where every man is, or may be at pleasure, a lawyer, what dignity can remain—what honor, what profit? and when dignity, honor, and profit, are gone, what becomes of the profession? Where will be found men of ability and character disposed to wreck their fortunes upon it? You present, in such a state, a field opened to the worthless and abandoned, but closed up to all others. Nor are litigants at court in any degree benefitted by the system. The remark was made long ago, and is as true now, that “He who pleads his own case has a fool for his client.” He would save a few dollars by undertaking that for which his past pursuits have in no wise qualified him, and becomes, ten to one, a debtor to his folly in a hundred times the amount.

In South Carolina, until very lately, a single perusal of Blackstone, the work of a few weeks, with some plausibility and address, would have been a ready passport to all the privileges, dignities, and immunities, of attorney at law, &c. We have heard of some such gallant achievements. Even now, although the courts have seen fit to elevate the standard, and exhibit more severity in their examinations, it is clear that six or eight months’ study would be an ample qualification; the effect is that crowds continue to flock in, and the name of lawyer becomes more and more a by-word and a jest.

We know that it is common to say a poor lawyer can do no harm. Juvenal said it two thousand years ago;

nec unquam
Sanguine causidici maduerunt rostra pusilli.

And Cicero has made good sport of such a character, calling him by very many hard names, and relating not a few of his blunders.* But are not these principles more plausible than true? We might naturally expect that the community would find out who was best entitled to its favor, and in the employment of legal men would search out those who are most skilled. In part this is the case, but then it must be remembered that folly is contagious, and that somehow or other the inexperienced and unsophisticated are often strangely deluded and cajoled by ignorance and audacity. The worst lawyer will be frequently employed—will work his way into notice; his *hoarse voice* will be heard everywhere in the forum; he will confuse everything with his jargon—bring contempt upon the profession—exclude good men from its ranks—increase the amount and costliness of litigation—and utterly unable to appreciate the high aims and destinies

* De Oratore, lib. 1.

of the profession himself, will sympathize with nothing great, thirst for nothing elevated, occupy no other place than that of barretor, too insignificant, perhaps, to be reached by the arm of the law.

We can scarcely appreciate the thorough system of preparation through which English law students are called upon to pass; their discipline has ever been most rigid, and habits of thought and business are acquired at an early period which adheres to them through life. In the inns of courts, or offices of attorneys, the long apprenticeship is spent. And, in the moot courts, legal questions are discussed with so much power of argumentation and extent of research, that eminent lawyers have been known to refer back, in after life, to these early discussions, and receive from them instruction. Cases are put by all parties; and, in allusion to this custom, the Lord Keeper Dudley, according to his brother, Roger North, used to say, that no man could be a good lawyer without being a good "put case." The custom of this country is to shove students up to the bar with little or no acquaintance with what is technically called practice; an extensive branch of the profession, to be learned only amid the various routine of duty gone through at a lawyer's office. The result is, that they are subjected to a thousand perplexities and mortifications when they are called upon to act, making very frequently the most egregious blunders in the plainest and most simple matters. Whatever amount of reading has been theirs, the discovery is soon made that book learning is not every thing; much must be obtained from other sources; and this, however insignificant it may appear in the eye at first, is as indispensable to a successful practice of the law as any of its leading principles and distinctions. A mere theoretical lawyer will make but a poor affair in a court-house, or amid the pressing calls of business, and be a hundred times chagrined and surprised to find others, with no proportion of his learning, more successful, and oftener consulted. The misfortune is that so many get into the notion that all this office business, as it is termed—these little forms and tedious exercises of drawing out papers perpetually—are the mere drudgeries of the profession, which suit ordinary capacities very well, but higher mind and loftier genius can only be content to seize upon great principles, which, like the staff of Hercules, they may wield with honor. Now, all of this is soon discovered to be a mischievous delusion, and experience very soon convinces that no expectation of becoming great lawyers, without having been great drudges, is a legitimate one. These so much slighted

details soon begin to vindicate themselves—to hold up their grim visages amid many a bright and beautiful prospect, and drag down to earth the giddy aspirant from his high flights and dizzy elevations. He must go to work now to study law, after he has been lawfully entitled “lawyer,” and meets with ten times the difficulty that would have attended the student. Pride and the fear of ridicule prevent a resort to others for information in such small matters; books alone must be resorted to, and what is wanted he acquires at a vast expenditure of labor, or remains content with confused notions or downright ignorance, until accident, perhaps, throws it within reach, or grim despair at last drives him from the profession.

Now, the natural way to obviate all this would be to make the same requisitions upon students here that are made in England, or similar ones, at least. We cannot, of course, expect, however desirable, that division of labor which has had so prominent an influence in elevating the profession there. We mean the districting off particular departments, each to be occupied by an independent class of lawyers. Thus, by restricting the sphere in which each is to operate, the greatest amount of learning and skill are ensured, and men, great in a few things, produced, who otherwise had been superficial in a great many. The student in England must make his selection of one of these departments; no intention occupies his mind of being everything that may be included in the term lawyer. He consults his capacities and taste to discover whether they incline him most to be counsellor, advocate, solicitor, conveyancer, or special pleader, and, having determined, throws his whole energies into that field. This system, however, is not practicable in a country like ours; perhaps it will be thought too cumbrous and expensive for the simple notions of our people; their versatility of genius, their activity and haste, their aversion to every thing that seems exclusive, and, above all, their insuppressible desire to be all things to all men—to the Jew, a Jew—to the Greek, a Greek.

With men accustomed to discriminate, it is common enough to coundound the benefits of a system with its abuses, and attach that character to the whole which belongs of right to some of its parts only. The profession of the law has come in for its full share of this distinction. In every age there have been those to rail against it, and heap upon its head all manner of opprobrium. Led astray by a few blots and blemishes upon its ermine, they have *wisely* concluded that all must be corruption. They argue, because an Epsom and a

Dudley have existed, that of necessity every lawyer must partake of their iniquities. The eyes of such men can see nothing clearly, but like Sir John Falstaff, they distort and magnify each object into "eleven men in buckram." But there have not been wanting those of an opposite character, who have had the capacity to perceive and the honesty to confess the reverse of all this—the ability to distinguish, in the clearest manner, between the just aims and noble advance of the profession, and its degeneracy. Our purpose is not to add an undue elevation to any set of men, or become their blind panegyrist; we but press the claims of truth and honesty. If there have been those who have prostituted their talents and learning, and even the law itself, to the vilest of purposes—if the utmost laxity of moral principles has characterized not a few of this profession—if much that has been charged adversely be susceptible of demonstration, all of which we have no disposition to deny, let it not be forgotten that there have been high and honorable spirits engaged in the pursuit—men of genius, learning, and refinement—philosophers, scholars, and patriots—patrons of all that is great and good—men wedded to the immutable principles of truth and justice—men with integrity of heart and honesty of purpose—advocates of liberty and friends of humanity—constellations to illumine the darkest night. And are not these the men such as the science of law left to itself—a science so liberal, so elevating, so comprehensive, would naturally produce; and have they not been produced in sufficient number to vindicate the profession from the illiberal, puny aggressions of those who affect to see nothing truly good and estimable in it? It is the glory of the law that, at all times, such men have stepped forth as its champions, its burning lights, to exhibit to the world the majestic evidences of its elevation.*

* The language of Bolingbroke will be called to mind here, where we have, drawn in admirable terms, the rule and the exceptions. "A lawyer now is nothing more, I speak of ninety-nine in a hundred, at least, to use some of Tully's words, nisi leguleius quidem cautus, et acutus præco actionum, cantor formularum, auceps syllabarum. But there have been lawyers that were orators, philosophers, historians; there have been Bacons and Clarendons. There will be none such any more, till, in some better age, true ambition, or the love of fame, prevails over avarice, and till men find leisure and encouragement to prepare themselves for the exercise of this profession, by climbing up to the vantage ground of science—so my Lord Bacon calls it—instead of grovelling all their lives below in a mean but gainful application to the little arts of chicanery." We quote at second hand from Mr. Christian, and, in other instances, have taken the same liberty, which we have too much conscience to conceal. "I have seen MSS. referred to," says D'Israeli, "confidently, which could never have met the eye of the writer." "The unlearned," says Mr. George Stephens, in his note upon Burton, "have ever furnished themselves with appropriate scraps of Latin and Greek from this book."

Wherever we find the term lawyer used in the pages of the New Testament, with a single exception, it is one of reproach and hearty condemnation. "Then one who was a lawyer asked him a question, *tempting* him."* "Woe unto you lawyers."† "Behold a certain lawyer stood up *tempting* him."‡ "With a certain orator or lawyer, named Tertullus, who informed the governor *against* Paul."§ What, then, have we to set in opposition to all this? Can any words of eulogy gainsay the words of God himself? Now, what if we should establish beyond a doubt that there has been a continued misapplication and misunderstanding of these passages, and that to bring them to bear upon the profession of the law, at this day, is the very height of absurdity.

"The word lawyer," says Dr. Doddridge, "suggests to us the modern idea of an office which did not exist among the Jews at this time, and has strangely misled some interpreters. These Jewish lawyers (as our translators call them) were the most considerable species of scribes, who applied themselves peculiarly to study and explain the law."

"The lawyers were a superior order of scribes and gave lectures on the law."—*Scott*.

What law? The law of Moses, of course. They partook, then, more of what we should call, in our day, the priestly order; and the corruption of such an order would have naturally elicited from our Savior the most unqualified condemnation. They who seek to extend these passages to purposes never anticipated, have no just or rational employment, we conceive, and derive no authority from their numbers.

The council of Melphi, in the fifteenth century, prohibited the practice of law to the clergy, holding to the idea of its being condemned in Scripture; but the decree of that council could have had little efficacy, for we find it an early maxim in England, "Nullus clericus nisi causidicus."

Congreve would be witty on the profession :

"Lawyer! I believe there is many a cranny and leak unstopped in your conscience; they say a witch will sail in a sieve, but I believe the devil would never venture aboard your conscience."

"As cold as charity in the heart of a lawyer," "Bonus jurista, mala christa," were proverbs in olden time.

"If you go to the law for a nut," says one, "the lawyers will crack it, give each of you half the shell, and chop the kernel themselves."

"Whether it was the ever opening hand of a practising lawyer, ever ready to grasp a fee, or whether a strong bias and habitual disposition for turning every trust and situation in life to their own private advantage, were the reasons why one of the wisest of our kings, with his council, composed of great men, and parliaments themselves, thought it necessary to incapacitate practising lawyers from sitting in the House of Commons, it is certain they were the first set of men expressly excluded."—*Carte's Hist. Eng.*

* 22 Mat., 35.

† 11 Luke, 46.

‡ 10 Luke, 25.

§ 24 Acts, 1. The only Christian lawyer mentioned is in 3 Titus, 13. "Bring Zenas the lawyer on his journey diligently, that nothing be wanting," &c.

"I speak to the face of many here present, the lawyers, of all the people in the land, are the greatest grievances to my subjects; for when the cause is good to neither party, it yet proves good and profitable to them."—*King James First's last speech.*

"Men allured to the trade of law, grounding their purposes not on the prudent and heavenly contemplation of justice and equity, but on the promising and pleasing thoughts of litigious terms, fat contentions, and flowing fees."—*Milton.*

"But when money will hire you to plead for injustice against your own knowledge, and to use your will to defraud the righteous, I would not have your conscience for your gains, nor your account to make for all the world."—*Baxter.*

"These men,
He knew, would thrive with their humility,
So wise, so grave, of so perplexed a tongue,
And loud withal, that could not wag
Nor scarce lie still without a fee."—*Ben Johnson.*

"A lawyer art thou? draw not nigh—
Go, carry to some fitter place
The keenness of that practised eye,
The hardness of that sallow face."—*Wordsworth.*

"What an excellent medley," says old Fuller, "is made, when honesty and ability meet in a man in his profession."

"If there be any instance on record, as some there are undoubtedly, of genius and morality united in a lawyer, they are distinguished by their singularity, and operate as exceptions."—*Junius.*

These are some of the severe expositions of legal character, which have emanated from sources deservedly high in authority, and exhibit the profession, it is conceded, in no amiable light. That they have a foundation in truth we are not prepared to question; but as to the justice of such sweeping, indiscriminate denunciations, it were but fair to put in a protest, for ignorance, political spleen, or private pique, have had no small influence, we may suppose, in their composition. However, it will be for the bar of the present day to determine how far it is assimilated to that of ages past and gone, and whether or not its conscience will be safe in repelling these insinuations and charges, as gross libels against the order. For ourselves, we entitle them such.

But, in turning from these unfavorable estimates of lawyers, we have a cheering prospect to contemplate in another quarter. There have been those to appreciate as well as to condemn, and the bright and glorious representations which they have afforded us will more than balance the dark ones already given.

"If, then, the law itself doth merit so highly of all mankind in general, for that it is the fountain of all benefits, what do the professors of the law deserve which draw these benefits out of that fountain, and derive the same unto every particular person? * * * Doth not this profession, every day, comfort such as are grieved, counsel such as are perplexed, relieve such as are circumvented, prevent the ruin of the improvident, save the innocent, support the impotent, take the prey out of the mouth of the oppressor, protect the orphan, the widow, and the stranger? (Would that this glorious tribute were universally just!)

* * * For if it be a worthy deed, as doubtless it is, for a man to defend his

friends and country with his right hand and his sword only, what an excellent service is it to defend them with his speech, his reason and wisdom."—*Sir John Davies*.

"There may be, it is true, in this, as in other departments of knowledge, a few unworthy professors, who study the science of chicanery and sophistry, rather than of truth and justice, and who, to gratify the spleen, the dishonesty, and wilfulness of their clients, may endeavor to screen the guilty, by an unwarrantable use of those means which were intended to protect the innocent. But the frequent disappointments and constant discountenance they meet with in the courts of justice, have confined these men, to the honor of the age be it spoken, both in number and reputation, to a very despicable compass."—*Sir William Blackstone*.

"If you are of studious habits, of a decided disposition of mind, not to be influenced by the subject of your study, and of a devotion to truth not to be overcome by sophistry, if you are firmly established in the principles of religion, and if you are one of those elevated spirits that are raised above the world, above its temptations and its opinions, in that case you may embrace these professions, and look up to a Cicero, a Sulpicius,* a D'Aguesseau, a More, a Bacon, a Clarendon, a Hale, a Mansfield, and an Eldon, as your dignified masters."—*Broadstone of Honor*.

"Dr. Johnson thought favorably of the law, and said that the sages thereof, for a long series backwards, have been friends of religion."—*Boswell*.

"I must needs say, that the improvement of reason, the diverting men from sensuality and idleness, the maintaining of propriety and justice, and, consequently, the peace and welfare of the kingdom, is very much to be ascribed to the judges and lawyers."—*Baxter*.

"The manners of lawyers have been such, in every age, as were the first improved and the last corrupted."—*Bishop Warburton*.

The avarice so frequently displayed in the profession has met with its not unrighteous reward from the pen of keenest satire. That such a stain should ever have been suffered upon the legal character is lamentable; for how degrading that appetite for gold, which can only open its mouth when a guinea is glittering before it! An old poet well expresses his indignation here:

"Conscience and the Kyng into the Court wenten,
 Were hoved there an hundred in hoods of silke,
 Serjauntes hii (they) semede, that serven at the barre,
 To plede for penyes and poundes the lawe;
 And not for our Lordes love unloose their lyppe once!
 How might bet mets (be measured) the mist on Malverne hilles
 Than get a mom (word) of their mouth, till money be them showed."

But why so sedulous in bringing up all these charges against lawyers? Is there not as much gross imposture and quackery under the guise of medicine as chicanery and low art under that of law? And who was ever filled with admiration even for the clerical character as it existed a century or two ago? Besides, is it sufficiently considered that the bar is a public stand, contemplated by the whole people, and that, as a public character, it is natural the lawyer should be vilified? Who has ever hesitated, when it served, to magnify the faults of public men, and urge them forward into the full blaze of day with pious zeal? But how comes it, we might

* The character of Sev. Sulpicius was one of the finest imaginable, if Cicer be credited. Neque ille magis juris consultus quam justitiæ fuit: neque consti-
 tuere litium actiones malebat quam controversias tollere.

ask, that with such a lavish expenditure of censure on lawyers themselves, those who encourage them into iniquity, and sustain them in it, are unscathed? What has the community to say to those who stimulate the cupidity of the profession by undue arts? Is it not just to take up the lash now and scourge away awhile upon them? Will the community forbear the punishment?

STATISTICAL VIEW OF THE STATE OF ILLINOIS.

PART II.

SOIL AND PRODUCTIONS.

The soil of the State of Illinois is essentially fertile, and her agricultural resources almost boundless. When her entire surface is reduced into judicious cultivation, she will make a larger return, acre for acre, than probably any similar extent of territory on the continent. We have seen that her surface is divided into two principal parts—the prairies and the alluvions of the river bottoms. And what are these prairies but alluvial deposites, varying in fertility as the waters which once covered them have left greater or smaller quantities of vegetable decomposition at one point or another?

It is unnecessary for our present purposes to enter into an examination of the theories of the formation of the prairies and alluvions, to prove that they do or do not arise from the same causes; it is enough for our present purposes to know that the constituents or properties of both are the same, or very nearly so. That the prairies were originally covered with water is perfectly evident; and a depth of water over them was attained, remarks Mr. Schoolcraft, “adequate to the deposition of those successive strata of small pebble-stones, sand, clay, fine, rich loams, and carbonaceous moulds, of which they are composed.” Mr. S. continues:

“On the breaking away of the obstruction which kept the waters upon the prairies, the waters would recede gradually into those channels in which it is now drained off, sinking lower and lower as the force of the current carried before it new portions of the yielding rock. The margins of these drains would remain covered with water until a comparatively recent period, and acquire further deposites of alluvial matter. These new deposites would be highly favorable to the after-growth of forest trees; while the intermediate table lands, being first exposed to the sun, would soon be covered

with a luxuriant growth of grasses and various herbage, that would attract from adjoining regions the innumerable herds of gramivorous animals which formerly inhabited the country. The effect of these immense herds of animals feeding upon the nascent plains would be to trample down vegetation and prevent the growth of large forest trees—a result that may be supposed to have been still further promoted by their annual exposure to fire. This hypothesis derives additional weight from an attentive consideration of the mineral character of alluvial deposits forming the surface of prairies, in which we often observe fine, hard, and compacted layers of earth, similar to those which are found at the bottom of mill-ponds where the water has long been stagnant," &c.

Who can estimate, then, the agricultural wealth of a region with so fine a climate, so well watered, and whose entire surface is mould, or an admixture of the *debris* of rocks, clay, sand, or gravel, with animal and vegetable remains?

The State contains 35,459,260 acres of land—of which 12,037,412 acres are included in farms, but only 5,039,545 acres are improved; yet Illinois is the tenth State in this respect. The States having a larger quantity of improved land are—

	Acres of im- proved land.		Acres of im- proved land.
New York.....	12,408,968	Tennessee.....	5,175,173
Pennsylvania.....	8,628,619	Kentucky.....	11,368,270
Virginia.....	10,360,135	Ohio.....	9,851,493
North Carolina.....	5,453,977	Indiana.....	5,046,543
Georgia.....	6,378,479		

Of these 12 037,412 acres of land included in farms, 879,049 acres of improved land and 1,487,182 acres of unimproved land lie in the counties bordering on the Mississippi; 183,815 acres of improved land and 287,657 acres of unimproved land in the Rock River counties; 942,656 acres of improved and 1,027,509 acres of unimproved in the Illinois river counties; 317,166 acres of improved and 338,086 acres of unimproved lie in the Sangamon river counties; 288,005 acres of improved and 332,345 acres of unimproved land lie in the Fox river counties; 255,223 acres of improved and 468,526 acres of unimproved in the Kaskaskia river counties; 64,019 acres of improved and 171,707 acres of unimproved land lie in the Ohio river counties; 178,149 acres of improved and 317,773 acres of unimproved land lie in the Wabash river counties; and in the Little Wabash river counties, and in the Kankakee, there are 142,335 acres of improved land and 240,952 acres of unimproved land—that is

to say, 3,298,012 acres of this improved land is genuine alluvion, or very nearly so, and 1,741,533 may be regarded as prairie of all descriptions—wet, dry, flat, and rolling.

About six-sevenths, or 30,451,715 acres of land in the State are out of cultivation, and 23,421,848 are “wild” lands, not included in farms.

The number of farms in 1850 was 76,208, making an average of 66 acres of cultivated land to each farm. Their cash value was \$96,133,290 and the cash value of farming implements and machinery was \$6,495,561. If the whole State was reduced to cultivation under the present imperfect system, the cash value of farms would be a little short of \$673,000,000, and the value of farming implements and machinery would be \$44,808,927. It is fair to presume, however, that these figures will be greatly increased when the entire State is actually under cultivation. The bringing together of so large a population, their separation into different pursuits, the improved means of cultivation, and the increased demand for the products of the soil, will place the price of land, the value of agricultural implements, and the productive wealth of the State, far beyond the results of our calculations upon the actual figures of 1850; so that \$673,000,000 can be regarded only as a distant approximation towards the value of the real estate in Illinois when her population shall be, instead of 851,470, between 5,950,000 and 6,000,000, or seven times the present value of the real estate, is but the merest approximation to what it will be when the present population is sevenfold greater.

These calculations do not pretend to verge towards even speculative accuracy. No account has been taken of the land occupied by roads, streets, parks, rivers, lake, creeks, &c., or by churches, cemeteries, public edifices, &c.; nor of the extraordinary increase that occurs in short periods in prosperous cities and towns—such an increase as occurred, for instance, in the city of Chicago from 1839 to 1853. In 1839, property in Chicago, valued at \$1,829,420, was valued in 1853 at \$22,929,937, an aggregate increase of nearly 1,400 per cent.

It is a matter of regret that fuller and more accurate information cannot be obtained as to the geological formation and character of the State. At present there is no source from whence it may be derived. We will proceed, then, to examine rapidly, with the imperfect information at our command, the natural resources of the State, and commence with her mineral wealth.

Marble, lime, and sandstone are found, one or the other in

every county; secondary limestone forms the basis of the rocks in the whole northern portion of the State. At Athens, in Dupage county, fine quarries of milk-white limestone, closely resembling marble, and capable of a high polish, have been found, and from which many of the most beautiful edifices in Chicago have been constructed within the last two years. This stone will ultimately constitute the chief material, where it can be procured with tolerable convenience, for all of our fine public and private edifices, particularly in our cities, and will render them remarkable for the permanence, elegance, and beauty of their structures. Near the city of Chicago a singular stone has been discovered of a dark grey color, a species of marble, with a granulated fracture, from which there is a constant exudation of bituminous matter, which does not, however, injure its value for architectural purposes. The Second Presbyterian church, in Chicago, is built of it; and is greatly admired for its antique and venerable appearance.

If lime should ever become an important element in our husbandry, or valuable for export, vast quantities may be procured in a large proportion of the counties. Recently, kilns have been built, and large supplies have been furnished Chicago from the west bank of the Des Plaines river. Sandstone suitable for building purposes exists in large quantities in the southern counties. When excavated and exposed to the air, it hardens, and is preferred to limestone for many structures.

There are quarries of fine marble in Randolph, quartz crystals in Gallatin and the adjacent counties, and plaster of Paris (*gypsum*) in St. Clair. But generally much more importance is attached to metallic minerals than to any others; and in this department, though Illinois has no mines of gold or silver, she possesses others of far greater value. There are two hilly regions in the State, one in the northwestern portion of the State, east of Galena, the other in southern Illinois, in the counties of Union, Johnson, Pope, Hardin, Gallatin, and Williamson, which seems to be an extension of the hilly region embraced upon and between the Cumberland and Tennessee rivers. These two regions constitute the metallic mineral regions *par excellence*.

In Hardin county lead mines have been worked for some years, but not so profitably as in other sections of the State, owing to the great hardness of the ore, which is due to the presence of silver and zinc. Lead is encountered in vast quantities in the northwestern part of the State. From the year 1822, when the mines were first worked scientifically, to

1835 the yield had been 70,420,357 pounds. As much as 13,000,000 pounds had been smelted in a single year. In 1854, 3,145,613 pounds were received from the Galena region in the city of Chicago. Much of this ore yields 75 per cent. of the metal.

Iron is one of the greatest productions of the State, and its value cannot be over-estimated. It enters, Colton well says, "into every man's wants, and into his constant use, and no man can do without it in a variety of forms. It constitutes the most prominent necessity of war, of peace, of agriculture, of manufactures, of commerce, and, it may be said, of every pursuit of life. It enters even into the finest embellishments of the arts. Time, that most momentous of all movements, carrying with it the destinies of all nations, cannot be accurately measured in its progress without it."

In 1850 the capital invested in the manufacture of pig iron was \$65,000, and 5,500 tons of the ore were consumed. In the manufacture of cast iron \$260,400 were invested, and 4,918 tons of pig iron and 50 tons of old metal were consumed. The total capital invested in the manufacture of iron was \$325,400; the value of raw material, coal, &c., consumed was \$197,830; the annual cost of labor \$153,264, and the value of the products \$511,385.

In the northern counties, particularly at the mouth of Plumb creek, and of several smaller streams, large quantities of copper have been discovered. Small quantities have also been found in the southwestern counties, in the bluffs of the Mississippi, and on the Big Muddy river.

Zinc has been found in considerable quantities in several localities, and small quantities of silver in the county of St. Clair.

Fluate of lime has been discovered in the vicinity of Shawneetown, and buhrstone near the junction of the rivers Mississippi and Illinois.

There are a number of salt springs in southern Illinois. The Ohio saline, near Shawneetown, was once extensively worked. A bushel of salt was obtained from between 250 and 300 gallons of the brine. The springs have been neglected in latter years, but we are not advised as to the facts which caused their general abandonment, except that we know it was from no failure in the quantity or quality of the water. Twenty years ago the Ohio Saline produced 200,000 bushels of salt, the minimum price of which, as established by law, was \$1 25 per bushel. Probably the sale of the springs by the State, the repeal of the *tariff* of minimum price and the active competition from the salt works of the

State of Ohio and the Great Kanawha salines in Virginia have prevented these from assuming the attitude of importance which it was thought they would. On the western base of the highlands known as the Oshawano mountains, lying near the Little Wabash, and extending around the alluvions of Shawneetown, there are extensive saline deposits.

There are numerous mineral springs in the State, which are resorted to for their medicinal properties. The more noticeable of these are between Ottawa and Peru and those in Jefferson county. Their principal ingredients are sulphur, iron, and sulphate of magnesia. There are also fine chalybeate springs in Johnson county.

In combustible minerals the State is very rich. Anthracite coal is known to exist in one of the southern counties, and bituminous in vast quantities in every part of the State. Many of the coal mines along the Illinois river have been worked for the past few years, and some for a much longer time. At Sheffield, in Bureau, large quantities are mined, and it is said to be of an excellent quality. Since 1850 this interest has been greatly developed. Several companies have been formed, and are supplying the St. Louis market from St. Clair county. One or two other companies, with a heavy capital, and employing large numbers of hands, are mining coal extensively on the Saline river, in Gallatin county, for the New Orleans market and to supply steamers on the Ohio and Mississippi rivers. This stratum of coal is said to be from five to eight feet in thickness, and it extends from the low grounds on the Wabash river across to the Mississippi, and indefinitely northward. It is supposed to be a part of the same stratum that *crops out* on the Illinois river, and in the neighborhood of Danville, in Vermillion county, on the Chicago branch of the Illinois Central Railroad, and in some of the other interior counties.

Though this interest has not assumed any great magnitude and importance, there are but 1,055 colliers and miners in the State, it is destined to become one of the most fruitful sources of our wealth. In the year 1853, 33,046 tons, or 72,705,000 lbs. of coal were received from the States of Pennsylvania and Ohio by the lake, at the port of Chicago, and 2,077 tons, or 4,569,956 lbs., from the interior of the State by canal and railroads. The consumption of this article is, however, very small now compared with what it must become when the number of manufacturing establishments shall be multiplied, and when a State with so scanty and so unequally distributed a supply of timber shall be teeming with population. The consumption in our houses,

manufactories, smelting-rooms, and laboratories, and on our railroads and steamboats, will be enormous; and the attention of an enlightened public cannot be too soon turned towards its further development. The increasing necessity of the State, as well as the fluctuations in the price of coal, and the uncertainties of our eastern market, demand that it should be done without delay. Without this powerful agent there is little prospect of a nation's rising to consequence in modern times; without it, she cannot rank among the powerful kingdoms of the earth—she is almost at the mercy of her more fortunate neighbors. It has everywhere, when accessible, superseded wood and charcoal. It blazes upon the hearths of our smiths, drives the wheels of our manufactories, lights up our cities by night, and sends us forward on our journeys by land and sea. It fashions all the implements of peaceful industry, and forges all the thunderbolts of war.

In the vegetable kingdom, the productions of the State are rich and varied, and generally resembles those of States in similar latitudes. The following list comprehends the forest trees and undergrowth most usually seen :

Cotton wood, sycamore, American elm, slippery elm, red maple, sugar maple, black maple, soft maple, striped maple, black oak, swamp oak, white oak, pin oak, black sack, overcup white oak, black walnut, butter nut, pecan nut, shag bark, pig nut, chesnut, black birch, yellow birch, white ash, blue ash, bass-wood, hoop ash, sassafras, persimmon, wild cherry, honey locust, swamp locust, papaw, hornbeam, iron wood, beech, coffee tree, white pine, cypress.

The undergrowth consists principally of sumac, dog wood, spice bush, London greenbrier, red bud, hazel, &c., &c.

The supply of timber in the State is limited, but it is thought that it would answer every purpose by economical use, if it were conveniently dispersed, for every part, but it is not, and the want of it has been a great annoyance and expense to the farmer. Wire for the purposes of fencing has been introduced with tolerable success, but farmers are generally having recourse to the Osage orange. This plant makes a thick, impenetrable, and beautiful hedge—hundreds of miles of it are now growing along our railroads and around the larger and better cultivated of our landed estates. In the northern portion of the State large supplies of plank for fencing, &c., are procured from Chicago. It is thought, since the conclusion of the reciprocity treaty with the Canadas, that lumber from the upper Canadian forest will be sold at Chicago much below the prices heretofore prevailing.

There are many varieties of the grape indigenous to the soil, and the experiments in Ohio, Indiana, and Kentucky, as well as some few in this State, show that the best varieties of the foreign grape may be readily domesticated. In 1850, 2,977 gallons of wine were manufactured.

We come now to consider the agricultural interests of the State, which is the basis of all others, and justly held in high esteem among us.

Corn (maize) and oats are the principal productions, the soil being particularly adapted to them. In 1830, the corn crop was 57,646,984 bushels, and the oat crop 10,087,241 bushels. The limits of this article will not admit of our entering into a view of the varied productions of the soil, with the adaptation of the State, or its different parts, to each. We must content ourselves with a simple statement of the amount of each leading article produced in a single year, with their value, from which, in connexion with the land in cultivation, a comprehensive idea will be formed of the agricultural resources and productive wealth of the State.*

In the year 1850, there was raised of—

	Est. value.	Est. value.	Est. value.		
Wheat, bush..	9,414,575	\$9,414,575	Maple sugar... 248,904	\$24,890	
Rye.....	83,364	41,682	Molasses, gals. .	8,354	4,000
Barley.....	110,795	55,397	Bees wax & ho'y	869,444	434,722
Buckwheat....	184,504	92,252	Hops.....	3,551	1,775
Cloverseed....	3,427	17,135	Hay.....	601,952	24,890
Other grass seeds	14,380	28,760	Corn.....	57,646,984	28,820,492
Flax seed.....	10,787	16,000	Oats.....	10,087,241	2,521,810
Potatoes.....	841,394	420,697	Orch'd products.....		446,049
Peas and beans	82,814	41,407	Garden do.,		
Sweet potatoes	157,433	78,916	exclusive of po-		
Tobacco, lbs...	2,514,861	150,891	tatoes.....		127,494
Wool.....	2,150,133	645,033	Home manufac-		
Butter.....	12,526,543	1,252,654	tures.....		1,155,902
Cheese.....	1,278,225	383,467	Wine.....		2,997
Total.....					\$46,924,716

There were sixteen woollen manufactories in 1850, employing 174 workmen—using 396,264 pounds of wool, at a value of \$115,364, and yielding products of the value of \$206,572. Their number, and the amount of capital employed in them, has been greatly increased within the past four years. Cot-

* In 1840, there was raised of—

Wheat.....	3,335,393 bushels.
Rye.....	88,197 "
Barley.....	82,251 "
Buckwheat.....	57,884 "
Oats.....	4,988,008 "
Corn.....	22,634,211 "
Tobacco.....	564,326 pounds, 49.09 per cent. increase to 1850.
Hay.....	164,932 tons, 264.96 per cent. increase to 1850.
Wool.....	650,000 pounds.
Value of home manuf-	
factures.....	\$993,567

ton has been successfully raised in small quantities in the southern portion of the State. Hemp is indigenous, and will become, from the facility with which it is raised, a valuable crop. Clover, blue grass, timothy, and many other grasses, grow luxuriantly in every part of the State. Among the most common fruits may be mentioned the plumb, crab apple, wild cherry, persimmon, black mulberry, cranberry, huckleberry, gooseberry, currant, strawberry, and blackberry. The hickory-nut, butter-nut, black walnut, pecan, and papaw; the apple, pear, peach, and quince; the turnip, beet, rutabaga, cabbage, cauliflower, tomato, and all the fruits and vegetables found in similar latitudes, flourish in Illinois. The castor-bean is cultivated to a considerable extent, and the oil frequently used as a lubricator of machinery, and for lamps.

The relative position of Illinois to the other States of the Union is high, as will appear from the following facts:

She is the tenth State in the number of acres of improved land, and the seventh State in the value of her improved farms. The States having a larger quantity of land in cultivation are—

	Acres in cultivation.		Acres in cultivation.
New York.....	12,408,968	Tennessee.....	5,175,173
Pennsylvania.....	8,628,619	Kentucky.....	11,368,270
Virginia.....	10,360,135	Ohio.....	9,851,493
North Carolina.....	5,453,977	Indiana.....	5,046,543
Georgia.....	6,378,479		

Georgia, sometimes referred to latterly as the Empire State of the south, contains 1,660,800 acres more land than Illinois, and 54,631 more of inhabitants, and has been a member of the confederacy since 1788, while Illinois was admitted thirty years thereafter, yet the cash value of farms in Illinois is \$379,833 greater than the cash value of farms in Georgia, and the value of farming implements in Illinois is \$511,401 more than their value in Georgia. Alabama, with a population approximating that of this State, and an area of 50,722 square miles, sinks still lower in the comparison. The value of her farms is less than ours by \$32,010,046! and her farming implements and machinery by \$1,279,898. North Carolina, one of the original thirteen States, with a population of 808,903 souls, and an area of 50,000 square miles, and with nearly as much improved land as Illinois, does not make a better figure. The value of our farms exceeds that of hers by \$28,241,424! and our farming implements those of hers by \$2,474,029. Similar instances could be adduced by reference to the southern States, but it is unnecessary to heap Pelion upon Ossa and Ossa upon Pelion.

In some of the staple products she ranks very high. For example, in the article of Indian corn she is the third pro-

ducing State. In 1850, Ohio produced the largest crop, 59,077,693 bushels, next, Kentucky, 58,675,591 bushels, an third, Illinois, 57,646,984 bushels.

She was the fifth wheat-growing State at that period, the four higher being New York, producing 13,121,498, Pennsylvania, 15,367,691, Ohio, 14,487,351, and Virginia, 11,232,616—and the thirteenth State in the number of her manufacturing establishments producing over \$500. She had of these 3,099, and the States having more, were—

Maine	with	3,682	Pennsylvania	with	22,036
New Hampshire	“	3,310	Maryland	“	3,863
Massachusetts	“	9,631	Virginia	“	4,433
Connecticut	“	3,913	Kentucky	“	3,471
New York	“	23,823	Ohio	“	10,550
New Jersey	“	4,863	Indiana	“	4,326

We proceed now, by an easy and natural transition, to the animal kingdom, and commence with the domestic animals. She is the eighth State in the value of her live stock. The actual wealth of the State, in this department, consisted in 1850 of—

Horses.....	267,653	} Increase from 1840.....	78,991
Asses and mules.....	10,573		
Working oxen.....	76,156		
Milch cows.....	294,671	} “ “	285,761
Other cattle.....	541,209		
Sheep.....	894,043	} “ “	496,371
Swine.....	1,915,907		
		“ “	420,653

Of the aggregate estimated value of \$24,209,258. The first thing that strikes us with these figures, is the inadequacy of the supply of horses for the actual wants of the State—a want increasing every day, and which must be supplied either by rearing or the more expensive mode of importation from abroad. There are but three and a half horses to each farm, and this leaves none for the drays, carts, wagons, and other vehicles in transporting produce to the railroads, to market, &c.; goods, merchandise, &c., through the streets of our cities and towns; none for our public works, or for the saddle, or the equipage of the wealthier classes—a necessity which will appear greater when it is recollected that no allowance, in giving three and a half horses to each farm, is made for those that are too young for work, and those kept exclusively for breeding. This necessity has been so seriously felt that a resort has been had to oxen and mules, and their inferiority is so great that it is fair to presume that it was the necessity alone which brought them into such general use. Of milch cows there is also a deficiency—the number of cows and other cattle together falling below the number of inhabitants. There is rather more than one sheep for each of the inhabitants, and something over double as many swine. In

the present condition of our prairie pastures, 30,000,000 more of all kinds of domestic animals might be supported.

We have seen that the annual value of the agricultural products of the State, so far as enumerated in our table, was, by a rough estimate, \$46,924,176, and the value of live stock, \$24,209,258, or together they were of the value of \$71,133,974. This will give to each inhabitant an interest in the annual products of the State equal to \$84; now, if we add to this the value of the animals slaughtered, the value of the farms, farming implements, &c., each inhabitant, if the property were equally divided, would be entitled to \$210, and if we add to this the value of 23,421,848 acres of land out of cultivation, and not included in farms, it increases the amount of each inhabitant's share to \$292.

Without taking into our estimate the value of stock or farms, the annual yield of the State is equal to \$55 for each inhabitant. Leaving out of view the subject of live stock of every kind, the yield per acre of all the land in cultivation for 1850 was something over nine dollars per acre. To each inhabitant there was a yield of a fraction over eleven bushels of wheat, and a fraction over sixty-seven bushels of corn. These two articles constitute a large part of the support of the population. The rye is principally used in the distilleries of spirits, and the barley in the manufacture of beer, a favorite drink with the German population, who make a vast consumption of it. The oat crop is, for the most part, fed away to the domestic animals.

The average yield of butter from the milch cows was 42½ pounds each, and the average weight of the fleeces of the sheep was 2½ pounds.

We proceed now hurriedly to give a list of the wild animals. In the early days of the State there were many wild horses ranging through the forest and over the prairies. They were stout, hardy, and swift, but under size, they were much used by the Indians, from which they acquired the name of Indian ponies. They were thought to be indigenous, but the better opinion is that they were the descendants of the horses introduced by the early French settlers. The buffalo once inhabited the State, but has now entirely disappeared; also the deer, and great numbers of these still remain. Together they constituted a large part of the support of the early settlers. The brown bear is another native of the State, rapidly disappearing before the advance of civilization.

The following constitute a majority of the wild animals still to be found in the State. The grey wolf, the black wolf, and the prairie wolf; the panther, wild cat, fox, raccoon,

opossum, gopher, and squirrel. The muskrat, otter, and beaver are occasionally found about the rivers and lakes.

The birds are numerous, and of a variety of kinds, but are principally those known in the older States.

Wild turkeys, geese, ducks, swans, cranes, prairie chickens, quails, and partridges are very numerous; so much so, that the farmer has rarely need of a poultry yard.

The rivers and lakes abound in fine fish, the most common of which are the bass, pickerel, pike, trout, perch, and white fish.

There are few poisonous reptiles or troublesome insects; snakes are not so common as in mountainous States, or so poisonous as further south. There are many different kinds of the lizard, but they are generally harmless. There are innumerable frogs in the sloughs and swamps, and some are said to be of the genuine species held in such high esteem by the French *gourmand* for its rich, rare, and *recherche* flavor.

The silk-worm is found in some parts of the State—the honey-bee in every county. The most troublesome insect is the mosquito, which makes its appearance about the first of August, and remains till the 15th of October. But it is impossible in the limits of an article of this kind to enter further into such details.

Such are our resources, which every day will continue to increase. As our population becomes more dense, and the means of support more difficult of procurement, the system of cultivation will be improved, and with it the yield per acre. The sloughs and swamps will be dried up, the alluvial bottoms will be drained, the forests will disappear, the rough places made smooth, and every nook and corner of the State be brought into cultivation. The bowels of the earth will give their rich treasures, and the industry, ingenuity, and enterprise of our citizens will turn them into a thousand forms, augmenting at each turn their own and the wealth of the State.

NOTES ON POLITICAL ECONOMY.

The following notes were prepared in 1842 by the editor, whilst engaged in the study of political economy. They are, for the most part, based upon the able treatise of Vethake, then a text book in the college of which he was a member, and may be considered a convenient though imperfect analysis of it for the use of those who may wish to glance over the whole field of political economy in a *nut shell*. The work of Vethake should be in the hands of every American student.

1. The *province of political economy* is to determine the laws which regulate the production, distribution and con-

sumption of *wealth*; to ascertain the course to be pursued or avoided by governments and individuals in the disposal of the wealth under their control, and promote in as great a degree as possible the happiness of mankind.

2. *Wealth* is utility existing to a limited extent and capable of appropriation. The mere possession of utility does not constitute wealth, or then air, water and light would be thus defined. However, the small number of things useful without possessing wealth are never by their nature the products of labor; hence to produce and consume wealth is synonymous with the production and consumption of utility.

3. *Utility* exists in such objects as can in any degree satisfy any of man's actual wants and desires. Thus, spirituous liquors possess utility. But it must not be inferred from this that the political economist would encourage their use, or adopt a low standard of morality. Far otherwise. The physical well-being of a people about which his science is conversant can be promoted in no more efficient manner than by diffusing as much as possible the benefits of religion, morals and education. The "utile" is not necessarily the "honestum." There may be a good or bad use of an object, a good or bad utility. The man who possesses only a sixpence possesses wealth. By the wealth of a community or nation is meant all the wealth possessed by its members.

Labor.—Disagreeable exertion of body or mind with the prospect of compensation. Hence mere action does not constitute *labor*. Labor is not wealth, it is only the products of labor that are valued.

Exchangeable value.—What is given ordinarily for any product at a given time and place, or in the same market.

Commodity.—What is offered in the market for anything else. Labor is a commodity. *Price*.—Exchangeable value estimated in money.

Money is that commodity which is most frequently exchanged for every other; gold and silver constitute the money of the world; other commodities have been employed. "Paper" is not money, but an obligation to pay *value* estimated in the precious metals. The existence of society requires some commodity that will answer as a medium of exchange. The precious metals have been found best for six reasons: First, their *durability*. Second, *great value in small bulk*. Third, comparative invariableness of their exchangeable value. Fourth, the capacity of being obtained in the same degree of fineness or alloyed with the same proportion of baser metals. Fifth, their divisibility. Sixth, capacity of being assayed and coined.

4. *Wealth* can be appropriated in two ways, to the gratification of present or future wants, and this latter by retaining it unemployed or applying it to the reproduction of wealth.

Every such appropriation of wealth is termed *capital*. The being employed as capital or not has no relation whatever to slowness or rapidity of consumption. The *accumulation of wealth* is its increase through the instrumentality of increased savings, and, therefore, immaterial products admit of accumulation in the proper sense of this term. The wages which the capitalist has saved to pay out are *immaterial* as well as material. The laborer receives for them as well protection from government, medical attendance, &c., as food and clothing. No other test of the *increase* of wealth can possibly exist, whether it be material or immaterial than that a greater quantity of it is produced and consumed in a given time than before. But since nothing more is intended by the accumulation of wealth than its increase, it will be manifestly proper to speak of the accumulation of immaterial products. *This idea has but lately found its way into the science.*

5. The elements of capital are: *Wages of labor*. *Instruments and constructions* with which labor is performed. *Materials* on which labor is exerted. *Finished commodity* kept on hand by the capitalist. *Money* appropriated to the circulation of the other constituent portions of capital. The wages of labor do not make a part of this money, this would be confounding real with money wages. Whatever is consumed as capital is *productively consumed*, otherwise unproductively. Capital is *fixed or circulating*. Fixed when it suffers only wear and tear in production. Circulating when wholly consumed. It has been customary to consider *immaterial* labor unproductive. But from our definitions (art. 4th) it will be seen that whatever species of labor is productive of utility, whether in matter or not, is *productive*; unproductive labor only exists when more is exerted than is necessary.

6. *Exchangeable value* exists from a capacity of being appropriated, the possession of utility and a limited supply. (See No. 2.) It is determined in every instance by the relation which the supply of an article or commodity has to the demand for it. By the *supply* of an article is meant the quantity which comes into the possession of the sellers, and is offered by them for sale during a given portion of time. By this is not meant the stock which they have on hand, which is generally less as the supply is augmented.

By *demand* is not meant desire to possess; it is rather estimated by the number of offers to purchase made in a given time, at any given rate.

If the demand for a commodity remain the same, and the supply be increased or the demand be diminished and supply remain the same, *prices will fall*. If supply be diminished and demand the same, or supply the same and demand increased, prices will rise. An expected variation in supply or demand will affect the present price. The degree of this variation will depend upon the nature of the commodity. These causes of "price" sometimes neutralize each other. But there are other circumstances which affect the prices of commodities; they will vary also on account of any change in the supply or demand of the money for which they are exchanged. But it is evident that all commodities will feel the effects of this "change" in the same degree, consequently their "exchangeable value," when compared *with each other*, will not be influenced by it. An increased demand for money will cause a fall of prices; an increased supply a rise of prices and *vice versa*. The exchangeable value of money, like everything else, is determined by relation of supply and demand with respect to itself and in respect to the commodity for which it is exchanged. The exchangeable value of immaterial products is estimated in the same manner; it is resolved into the compensation or wages of labor. The prices or exchangeable values of all things material or immaterial, meaning labor by the latter term, are determined *then* in every instance by the relation subsisting between supply and demand.

7. *Prices* fluctuate with a fixed law; there is a mean or average price which is invariable, while the actual or market price oscillates about it, and has a constant tendency to become equal to it. *Wages* would be the same in all employments if the circumstances under which *labor* is exerted were in every respect the same. The causes of variation are, first, the agreeableness or disagreeableness of the occupation, including honor or disgrace, healthiness or unhealthiness, chances of success, &c. Second, the qualifications natural or acquired which they demand. In every employment, there is a natural or necessary rate of wages about which the others oscillate. The wages of labor will be at a certain fixed rate in each occupation, while the daily, weekly, or monthly wages of the laborer may admit of a certain degree of diversity, depending upon considerations above stated; all this goes on the supposition that individuals in seeking for employment are actuated by interested motives, and that full scope is given to the operation of supply and demand; where these do not influence, as in the case of Christian missionaries, public officers, and monopoly trade establishments,

the rule will not hold good. Again, our reasoning will apply only to the same part of the country. The wages of labor will vary much in different sections, and not be equalized because of the difficulties attending a change of residence. But an emigration of laborers will take place to some extent.

8. If the circumstances of advantage and disadvantage were similar (profits excepted) in every branch of industry, it would follow that a *general rate of profits* would exist, also a *natural* or *necessary rate* of prices; as in the analogous case of wages, (No. 7,) variations may occur from the difficulty of transferring capital.

The possibility of transferring capital will vary in different branches of industry; in some it will be with facility, in others only by a gradual transfer, by declining to repair the wear and tear, &c.; there is no loss in transfer of capital, it is rather to avoid loss that it is made, but a loss took place before the transfer. Generally, fixed capital is transferred with difficulty, circulating not. The exception to the rule that there will be a natural price is found where the supply cannot be increased, as old books, statues, rare wines, &c. If the circumstances of advantage or disadvantage which were supposed equal should vary in different employments, profits will vary too. In consequence of the advantages conferred always by landed property, it may pay less than the ordinary rate and still be desirable. But though profits vary in different employments, they will tend to be at such a rate in each as will offer no inducement for transferring capital; this will be the *ordinary rate of profits*. Let an individual dispose of his capital as he will, he cannot expect eventually more than the ordinary profits.

Where a thing replaces the capital consumed in its production, and yields in addition the ordinary profits, it is said to *repay the cost of production*.

9. In the case of *monopoly* there is an exception to the above rules; the monopolists will *understock* the market and receive more than *ordinary profits*; they will raise the price of necessaries rather than luxuries, though the Dutch diminished the supply of the latter to obtain a higher price with success. A patent right operates as a monopoly to some extent; and those who are first known in a market receive an advantage, partaking in a degree of the nature of a monopoly.

10. RENT, in the politico-economical sense of the word, is *profit beyond the ordinary rate of profit*. It is yielded in different branches of industry, wherever one portion of capital is invested under more favorable circumstances than another,

as in the case of peculiar productiveness of soil, in agriculture, favorable situation with respect to markets, &c. But the capital last applied, being debarred of these advantages, yields only the *ordinary profit*, as after all the best lands are taken up. This last capital is applied most disadvantageously, or under the most unfavorable circumstances, except in those cases where there was a mistake in the application of former capital, or where former situations have deteriorated. The "*cost of production*," which determines "*price*," is the cost of producing under the most *disadvantageous* circumstances. Landlords are the receivers of rent; they receive it not as a compensation for expenditures on the soil, but as a compensation for the use of the natural powers of the soil. As Dr. Brantly quotes from Smith, they reap where they have not sown. It is difficult to distinguish what is rent from what is profits; the produce of labor comes first into the hands of the capitalist, and is by him distributed to landlords, farmers, and laborers, though one individual may be at the same time two or all of these. The land which pays rent will have a greater exchangeable value than the capital expended upon it. Rent is, as well as profit, the product of labor.

11. The cost of production may be separated into the two following elements: The capital consumed in producing a commodity, and the ordinary profits on the whole of the capital employed. Hence, prices will fall either when the capital is consumed, or when the amount of profit received is diminished. Thus the following circumstances will be attended with a fall of prices: The employment of a less amount of capital; the substitution of fixed for circulating capital; the shortening of the period employed in production; a fall of wages; a fall of profits. It is not possible for wages and profits to rise together—on the contrary, as wages fall, profits must of necessity rise, and *vice versa*. In general it will be true that prices will suffer proportionally more alteration from a given change in the rate of wages, and less alteration from the corresponding change in the rate of profits, where the circulating predominates over the fixed capital.

It is an error to attribute the low price of British goods to the lowness of wages—it is due to the lowness of profits and wages taken together. If wages in Britain were to rise, the prices of those commodities which are the product of fixed capital would fall.

The price or exchangeable value of an article cannot be regarded as determined in every instance by the quantity of

labor employed from first to last in producing it. There is another element, to wit: The *TIME* employed from the application of the several portions of labor, until the production of it in its complete state.

When the "*time*" of which we have been speaking is said to determine a certain amount of profits on the capital employed, or what is at present the same thing, the wages of labor, these profits are not in *exact* proportion to the time. Whatever may be the amount of profits for a year, if received at the end of that time, somewhat less than half as much will be proper for six months. Generally, improvements in the arts result from a greater productiveness of *labor*.

12. *In the progress of society*, from the nature of the land, that is, from the necessity of taking new land into cultivation, the whole amount of wealth will be proportionally diminished; that is, proportionally to the amount of labor applied. The exchangeable value of agricultural products will rise in reference to all others. Rents will rise and with them the value of lands, rise because of the new land taken into cultivation, and the augmented value of agricultural products consequent upon it. Also, if wages remain the same, profits will fall, because of the rise of rent. There will be a less rapid accumulation of capital, since the lower the rate of profits the less inducement to save, and the rate at which *population* and *wealth* increase must, in consequence, be continually retarded; these consequences are modified, and, in some cases, counteracted by improvements in the arts, or of the productiveness of labor, and the removal of *restrictions* upon industry; but as these improvements take place less rapidly in agriculture than in other arts, the relative value of agricultural products will receive another increment. Improvements in agriculture will cause *rents* to fall, since they tend to obliterate the distinctions between land; in other arts they will cause *rents* to rise, because the demand for agricultural products will be increased and inferior land cultivated. Improvement in the arts will produce a more rapid augmentation of capital. If the same rate of wages be paid on the *progress of society*, capital and population may increase or diminish together at the same accelerated or same retarded rate. *The rate of wages* is dependent on the relation which the capital of a country bears to the number of the people, therefore, population should be made a matter for consideration. *How* is population ever checked? In two ways: One preventive and the other positive. Among the former, *late marriages* and *vicious habits*. Among the latter, wars, famine, pestilence, &c. But why do late marriages take place? Because of the difficulty of pro-

curing the means of support ; and this operates on all classes in a greater or a less degree. Instance, Prussia. Hence, every rise of wages, unaccompanied by improved habits, augment the number of marriages.

13. The difficulty of procuring the *means of support* is a different proposition from that which asserts population to be checked by the difficulty of procuring *subsistence*.

The deduction from the former proposition is, that *population* is ever pressing upon the means of support, and has a tendency to increase more rapidly.

The word *tendency*, used in a mathematical sense, it is greatest not when population increases *most rapidly*, but, on the contrary, when this increase is *slowest*.

This tendency is the principle of population, whose strength can easily be estimated by comparing the United States, with a population doubling itself in 25 years, with other countries where population is stationary, or even declining.

The average, necessary, or natural rate of wages in any country must always remain the same, so long as the *habits* of the people in relation to marriage continue the same. The rate of wages is determined then by the *HABITS* of the people, in the sense that we have used the word. Improve the habits and you improve the *rate*. But how can this be done? By enlarging the desires of the great body of the people, and to promote among them the growth of habits of foresight. And how can this latter be done? By expanding the understandings by *EDUCATION*, intellectual, moral, religious; by improvements in the arts, which both increase the number of a people and enlarge their command over the means of support; and finally, savings banks, "benefit societies," and admission of the people as soon as they are sufficiently enlightened to a participation in political affairs.

14. Emigration and immigration. An increase of population is not a criterion of national prosperity, however desirable it may be in a rude stage of society for the natural defence. Emigration is profitable when the emigrants take with them less capital than would employ them at home. It is an evil when the most valued citizens leave, as in France after the "Edict of Nantes" was revoked. Immigration is profitable when it brings "skillful" emigrants and capital to employ them; but in such a country as the United States "laborers" alone are profitable, being employed in the western wilderness. It is profitable when a greater proportionate number of able bodied men are introduced. In the progress of population it is exceedingly desirable that, however rapidly capital be augmenting, the *rate* at which it augments should not be a diminishing one.

15. The condition of a people will be better when the necessities of life are dear and the luxuries cheap than in the opposite case. Instance, Ireland. An extraordinary mortality among a people will cause a permanent rise of wages; but an exception to this is found in wars, which expend unproductively vast resources, and take away the most productive portion of the community. An improvement in medicine has a different effect from "enlarged mortality." The "*monks*," by not marrying, made room for others to do so. If they were "*unproductive laborers*" they were a disadvantage to the world, and only for this reason.

16. MONEY.—If the circulating medium of the world consisted entirely of the precious metals, if the cost of transportation was nothing, prices everywhere would be the same. An addition to the circulating medium at a particular place will cause a local rise of prices, exportation of money and *importation* of commodities other than money, and this process will be continued until prices are everywhere equal again, being a little greater than they were before the process.

But this state of things will not last, less capital will be employed in mining, gold and silver will rise and prices fall to their former level. The value of gold and silver, like every other commodity, is determined by the cost of production. If the precious metals be coined the same conclusions may be drawn.

Coined money will have an advantage in exchange over bullion in proportion to the *confidence* in the accuracy of its stamp. A government cannot enhance the value of a coin by charging a higher seigniorage than will cover the cost of coining. The efficacy of a circulating medium is increased exactly in proportion as the *circulation* is quickened. If the demand for money be diminished the circulation will be quickened. If the demand be increased it will be rendered slower. The expense of transportation, using this term most comprehensively, is the only reason why the prices of things are not, in fact, everywhere the same, so long at least as commerce is free from restrictions.

When it is said that prices depend everywhere on the cost of *producing* the precious metals, the term *production* is used in its *broad* as well as *strict* sense. That is, when the metals are produced in the country, or the commodities are produced for which they are exchanged.

17. *Bank notes*.—Suppose all paper money to have this form, and that the circulation of any section of country be increased by their issue, the effect will be a local rise of prices, exportation of specie, importation of other commodities, until

prices everywhere are equalized ; a less production of specie will prevent prices from being higher than they were before the "*issue*," but they will be higher for another reason. Paper will save the wear and tear of specie ; less of it will be required, produced ; mining will be carried on under less "*disadvantage*;" the prices of the metals will fall equivalent to a rise of prices, though slight. Paper money *may* be exported as well as specie, and will have the same effect on prices. To increase the circulation \$100,000, \$150,000 in notes must be issued if \$50,000 in specie was extracted from circulation as a base.

18. Specie and bank notes do not comprise the *circulation*. Bills of exchange, drafts, transfers in the column of a ledger, bank checks, public security, representatives of property, and such like enter largely into this *circulation*, and have similar effects upon prices as "*bank paper*" and specie.

19. The *value* of the circulating medium remains always the same, whatever be the augmentation or diminution to which it has been subjected, consequently, it does not matter whether the "*circulating medium*" be great or small. A diminution or augmentation in one country will be equally distributed throughout the world.

20. There are three kinds of banks, discount, deposite, and circulation. One bank may partake of the character of all these, as in the United States. There will be no inducement for a bank to issue its own notes unless to a greater extent than it has specie in its vaults. How comes it then that a bank maintains its credit, when every one knows that it could not redeem all of its notes with specie were they presented at the same moment? 1st. Because it has in its vaults, in addition to specie, the promissory notes of individuals to an amount greater than the amount of its own notes. 2d. Because these promissory notes are for short times. 3d. Because the bank sometimes possesses property exclusive of its capital ; the term *capital* strictly being applied only to the *specie* in vault. But with extended circulation its condition will gradually be *impaired*, and a *run* will finally be made upon it. Banks have the power of expelling all specie from circulation, and by this means they will be enabled to guard against a "*run*" after their issues have been expanded ; and when they have done this they will push their issues to the limits of safety, which limits experience only can define. Now suppose all this to have been done, and a particular bank attempts to enlarge its circulation beyond its usual proportion, its notes will enter other markets and lose their character by being seen so far from home (thus importing an

unusual augmentation;) other banks will receive them either below par and thus injure them, or demand the specie for them, so that it will be brought back to the condition it was in before the *experiment*.

The banks thus mutually check each other, but this may be removed by a combination of them; yet, in consequence of the independent banks and the money markets abroad, to no extent. After a certain amount of capital has been invested in banking, strictly speaking, no more can be so invested, and new banks will transact business at the expense of the old ones. It is impossible that the circulating medium, and, of course, prices, shall go on continually augmenting.

21. There are three *advantages* in the bank note system; convenience, less production of metals, and, of course, augmented production of other commodities; exportation of specie dispensed with, and, of course, importation of other articles. Others have been assigned, but illegitimate, such as cheapness, creation of capital, creation of credit.

22. The disadvantages are: alternate expansions and contractions, with its effect upon prices and upon debtors and creditors. Refusal to discount notes at particular times, with its effect upon merchants and all with whom they are connected. The power which the directors and their friends have to speculate, by means of these alternations, upon the people, a kind of swindling. Their partiality to particular individuals in allowing them money to carry on this speculation. Their effect in engendering a spirit of speculation. Lastly, the greater effect upon the circulating medium from a demand for a given amount of specie, when that medium consists of paper, than when it consists of specie entirely. Suppose the paper in circulation in South Carolina be \$1,000,000, and specie in vault \$250,000. Now, let there be a demand for \$100,000 in specie for exportation, the \$1,000,000 paper will be reduced to \$600,000 if the same degree of safety be desired. But an exclusive specie circulation is impossible, therefore this disadvantage of paper circulation is not so great as we have supposed.

23. Another evil of banks is the "special legislation" which they cause and the possibility of their operating directly or indirectly in corrupting the members. These members also have privileges in purchasing the stock.

The large profits that are made in banking is not a gain of the stockholders at the expense of the community. They are rather a measure of the benefit conferred on the country by the substitution of a bank note for a specie circulation, as this benefit has been shown in 21. Ought this not to be a

“national gain?” Governments have thought so and exacted a “bonus” from the banks, and they have sometimes turned bankers themselves; but this is a great evil, as it increases the power of the legislators. But were they to exact a “bonus” just large enough to leave the stockholders the ordinary interest of their money, it is evident that all evils would be remedied.

24. The arguments for having many banks are, first, the more equal diffusion of the advantages of the system; second, their mutual checks upon each other; third, the unequal influence of *wealthy monied institutions* would be diminished. The disadvantages are, first, the danger of improper management from want of skill; second, a greater tendency to expanded circulation; third, their being introduced in places where they are not needed, and the effect upon farmers in inducing speculation; fourth, the greater probability of counterfeiting. A national bank would prove an evil from being “*a wealthy monied institution.*” Private banking would be an evil, since irresponsible persons would issue notes and the community be imposed upon.

25. An exclusive specie circulation would be preferable to the present monetary system of the United States, but a circulation consisting in part of specie and in part of bank notes would be preferable to all called a *mixed currency*.

26. The best circulating medium for the United States, one that will in no degree be liable to alternations more than a specie one, which will obviate all the evils of banking, and add but very little to executive patronage, is the sub-treasury scheme. Let the Secretary of the Treasury issue treasury notes, on which no interest shall be paid, in payment of the public creditor, whenever they shall be preferred by the latter to specie, and let them be received for taxes when the tax payer shall prefer. All the discretion rests with the public creditor and debtor. The amount of issues to be determined by the wants of the merchants. The advantage of exporting specie will be lost by this system, since it will be locked up in the vaults of the treasury, though a portion of it might be expended by the government in the payment of national debt, &c., &c.

27. The present banking system should be abrogated, which may be accomplished slowly in three ways: The legislature might prohibit the issues of notes of the smallest denomination, and next those of a rank or grade higher, and so on, until all bank notes are driven out of circulation; or, secondly, the legislature might decline incorporating new banks or renewing charters; or, third, it may exact a bonus high enough to reduce banks to ordinary profit. If either

of these be done, there will remain banks of discount and deposite, which will pay a less interest on the amount deposited than it charges on discount, the difference being its profits. But this can never be brought about until the States yield to general government alone the right of incorporating banks.

28. Suspension of specie payments in England, 1797 to 1822; in United States from 1814 to 1817 and in 1837. But bank notes did not fall as low as was expected. Yet at such a time the banks have no check upon their issues unless compelled to resume. An appreciation in specie may account in part for a depreciation of paper. To issue notes representing land rather than specie is objectionable, because a limit could not be prescribed to the issues, and because land varies in value more than specie.

29. Governments have debased the currency by fixing a higher value than the worth of a coin, and by issuing bills of credit. Both highly injurious.

30. In a free system of banking, government ought not to limit the interest on money, but with our banking system it is well to guard against monopoly.

31. Governments have shown particular favor to some branches of industry at the expense of others, on the supposition that they only were productive, or at all events more productive than the rest. Agriculture was the only branch, according to Quesnay and others, which was productive, operating through the "powers of nature," which was truly the only producer in the case. But this is not true; in all branches the powers of nature co-operate. Witness steam in commerce and manufactures.

But agriculture is said to yield rent, so do commerce and manufactures sometimes; but rent is not a criterion of profit, for if all the land was made of the same quality there would be no rent, so agriculture will yield no rent when it is more profitable.

32. Commerce is properly applied to the whole series of acts by means of which the products of the farmer or manufacturer are transported from the places of their production and distributed among the individuals by whom they are destined to be consumed. The definition that it is the exchange of equivalent commodities is too much restricted. It is productive because it adds to exchangeable value. If not productive, there should be no diminished production if it ceased. But there would be. Speculation is sometimes productive, when it will serve to distribute over a certain period the actual supply of any article in the most advantageous

manner without any counterbalancing public disadvantage, and this will be when there are no contractions and expansions by the banks. Capital employed abroad may sometimes be more profitable to a country than capital employed at home. The balance of trade has been a fruitful source of error. Governments having supposed that a country could only prosper when there was an influx of specie, or when the exports exceed the imports; the contrary, however, is true principle. Imports should embrace the value of exports and the profits on them. But, if there should be a "balance of trade" in favor of a country, it does not follow that there would be an influx of specie. If exports exceed imports, capital will generally have emigrated. Exports and imports are estimated in the country from which the former went and in which the latter came. To protect the domestic producer, a tariff should be imposed, greater than the difference between the cost of the domestic and foreign article. If a tariff be imposed for revenue it will afford no protection and *vice versa*.

34. *The tariff question.*—The low price of foreign goods is a clear gain to a country, which would be lost by imposing a duty for the protection of home manufactures of higher cost. A tariff will diminish imports and, of course, exports.

It is impossible that *all things* should be obtained cheaper abroad than at home, for any time; specie will be sent from the country, prices will fall as low and even lower than the prices of foreign articles, and they will no longer be imported.

If foreign countries impose restriction, thus injuring themselves as well as us, there is no reason why we should do the same thing, unless we would be guilty of an absurdity. But suppose foreign duties be so high as to prohibit any other import from us but specie, could they drain our country of specie? No; prices will fall as specie leaves the country, until it will be unprofitable to send more.

The *prosperity* of England is no argument in favor of her protective system. When we consider the misery there, we might ask, Would there not be *more* prosperity were all restrictions removed? Holland and Switzerland flourished without them. Protection never creates *capital*—it can only cause it to be transferred. But there was an advantage in the protection afforded by Edward the Third to manufactures—it produced an opulent middle class between lords and vassals, necessary for the attainment of liberty; but this can have no weight in the United States. Ought not a tariff to be imposed until our country has attained the neces-

sary skill to produce as cheap as England? Who shall determine whether we ever can produce as cheap? It is a difficult question; and the legislature, urged by influential citizens, will find reason for continually imposing duties.

The tariff regulations have injured some portions of this country for the benefit of others—though the ultimate injury to the whole country is indisputable. The north, as well as the south, is injured, though in a less degree.

35. But a *sudden* transition from the restrictive to the free trade system would cause great distress in the country, by breaking up branches of industry; any such change should be gradual. The government is not bound to continue protection to the manufactures it has created; if it was, it must necessarily prohibit all improvement in the arts, for such improvements injure those whom the government formerly fostered. The tariff system has not benefitted the country, by giving employment to women and children, since the same amount of wages is distributed among a greater number.

36. A BOUNTY is precisely the same in its effects as a tariff.

37. The advocates of free trade would submit to a modification of it. Since it is important to confer *stability* on the employment of capital, and since, in case of war, under the free trade system, this *stability* would be disturbed at its completion, as it was 1815. A duty of five or ten per cent. might be imposed, provided such duty would afford protection, and this duty would be a tax, paid by the country, to obtain a permanency in the investments of capital. A higher duty, such as 50 and 100 per cent., can only be considered as a legislative absurdity, to which all the evils which might possibly accrue from free trade are preferable.

38. If a duty on imports be imposed, the best one is a duty *ad valorem* on every article imported; this would guard against high protection and "*log rolling*," but if protection be afforded to one more than another, those branches which favor the national defence should be preferred. If governments abroad should afford bounties to their manufactures, *ours* would be undersold and ruined; it would be expedient to afford them a bounty, too, gradually diminishing it from time to time, so as to guard effectually against "*the evils of change*."

Were the British to repeal the corn laws, and were corn to the amount of ten millions (which is improbable) exported from this country, our imports would be increased, which would interfere with domestic manufacturers, and they would require greater protection.

39. Two arguments have been advanced in favor of the *restrictive system*: 1st. It develops a greater intellectual and physical power, by increasing the number of occupations; 2d. It brings "*the many*" together, which is favorable to the advancement of education, &c.

Three against it: 1st. Manufactures will have more capital applied than is necessary; 2d. The fluctuations in its prices are more wavering, and laborers oftener thrown out of employment; 3d. It causes a permanently augmented circulating medium; and there may be a fourth, That prosperity, which is the least dependent on artificial regulation, will be most stable and most desirable.

40. The reason why the tariffs of 1824-'28 were required was that too much capital had been employed in manufactures, and prices fell; some of the richer manufacturers were opposed to these tariffs. A duty on one article encourages the importation of others that are free. So there are two reasons why the "revenue" has increased with increased protection duties: Higher duties exacted on those imported; and more of them imported by reason of the protection afforded others.

Only such manufacturers are benefitted by protective duties as those whose sites yield rent; others get the ordinary profit, if they do not get less.

The restrictive system has been called the "American system," because it encourages American industry; but the fact of the case is quite the reverse: "free trade" is more properly the "American system."

Mr. McDuffie's "40-bale theory" is a bad one; the producers *never* pay the tax—consequently, the southern planters were not, as he supposed, the only ones who suffered by the tariff. If they suffered, it was as consumers; if more than others, because a diminished exportation would cause a transfer of capital; but then it must be remembered a market would be opened at home *for their cotton*.

COMMERCE, STATISTICS, ETC.—SUBJECTS OF UNIVERSITY INSTRUCTION.

In a late report of the commencement of the collegiate department of the University of Louisiana, at New Orleans, it is stated:

"This being the first presentation of the University prizes, much interest was elicited regarding them. While they reflect high honors upon the liberal donors, the standard of scholarship in the University has been highly elevated thereby.

"The lamented Touro and the liberal merchant Glendy Burke have set a noble example to the men of wealth in Louisiana by extending appropriate and valuable encouragement to a home institution, where our sons will not imbibe doctrines adverse to the institutions of our southern clime. The Hon. Mansuel White stands among the first of liberal donors to our State University, having

endowed a commercial professorship by a donation of fifty-six lots of land, situated in this city. The board are devising steps to render this endowment of immediate value to our commercial community. We are pleased to notice that the university is giving unequivocal testimony to the energy of the new board of administrators, who seem constant in their efforts to give us an institution second to none in the Union."

No one can hail the determination of the board with regard to the university, and especially to the commercial chair, with higher gratification than the editor of this Review; and the mention of the subject suggests some points bearing upon its particular history, which may not inappropriately be referred to.

In July, 1847, we prepared an article for the pages of the Review entitled "Commerce and Agriculture in Universities," (vol. III, p. 502,) basing ourself upon the recommendation of the Southern Commercial Convention of 1838 "to introduce commercial education among our youth." In this article it was remarked:

"Statistical and commercial information, or such as is necessary in the conduct of the mercantile operations of a country, have been least fortunate of all in attracting the regard of scholastic institutions. As separate and distinct branches of university instruction, they have until very lately scarce had a place, and even now but to a limited extent. We have educated every class of the community, most of them specially, except our merchants, and these we leave to glean what they can upon the mart or on the bourse, without any of that light and instruction which, previously imparted, would cause them to adorn their places and advance their country. Can it be wondered, then, that the mercantile classes yield to the nation so few influential and leading citizens, men of the stamp of Roscoe or Ricardo? Can it be wondered that trade is so often stigmatized a 'gainful craft,' instead of winning, as it deserves, the appellation of a liberal and civilizing pursuit?"

"It will be hardly necessary for us to dwell much at length upon the importance of statistical knowledge, as a study, although, indeed, we do sometimes hear it idly depreciated. Abstract arithmetic is as true as the laws of nature, and in its application to matters of fact, to the operations of men, it is as certain and reliable, if not more so, than any of this kind of knowledge."

"A State University being now in the course of organization in Louisiana, it seemed but fitting that we should speak, on the part of the great commercial interests of New Orleans and our country, a share in its results more special than has hitherto been contemplated. The university is to be located in the city of New Orleans, a site destined, in the

apprehension of the calmest reasoner, to be one of the greatest, if not the greatest, commercially, in the world. It is peculiarly fitting that such a city, which lives and has its being by commerce, whose merchants are almost without number, prospering and accumulating wealth beyond precedent; it is peculiarly fitting that such a city, we say, should lead the way in establishing what our whole Union requires, *a department of collegiate and university education, addressed entirely to the commercial classes*. Could any department be conceived more important, or confer more inestimable advantages?"

We shall now proceed to make a brief exposition of the duties of the professorship, its organization, &c., and give the outline of its labors. In this we are without guide from any other quarter, but give our own views, the result of long and continued reflection upon the subject.

PROFESSORSHIP OF PUBLIC ECONOMY, COMMERCE, AND STATISTICS.

Embracing the Theoretic and Practical Departments.

I. THEORETIC.—Origin of Society and Government; Theory, Forms, and Ends of Government; Rights, Duties, and Relations of Governments; Sources of National Wealth and Progress, and Causes of National Decline; Production, Distribution, and Consumption of Wealth, with the Laws appertaining thereto.

II. THE PRACTICAL AND STATISTICAL.—Statistics of Population and Wealth in their application to *Commerce, Agriculture, and Manufactures*.

1. History and Progress of COMMERCE, its Principles and Laws; Home and Foreign Commerce; Tariffs, Treaties, Life Insurance, Roads, Canals, Shipping, and Revenue, Systems of Reciprocity; Balances of Trade; Mercantile and Navigation Systems; Colonies and Colonial Systems; Banks, Finances, Accounts, Transportation, Book-keeping, Principles of Merchant Law; Commerce of Nations, Ancient and Modern; Geography of Commerce, Commodities of Commerce; Literature of Commerce, &c., &c.

2. Progress and Results of AGRICULTURAL SCIENCE; Principles of Agriculture; Comparative Condition of Agricultural, Commercial, and Manufacturing Communities; Statistics of Agriculture, &c.

3. Origin and Progress of the MANUFACTURING SYSTEM; its Relation to the other Pursuits; Invention and Machinery in Manufactures; Condition of the Manufacturing Classes; Statistics of Manufactures, &c.

Text books for the course, among others:

Locke's *Essays on Government*; Lieber's *Political Ethics and Hermeneutics*; Montesquieu's *Spirit of Laws*; Smith's *Wealth of Nations*; McCulloch's *Commercial and Geographical Dictionary*; Say's *Political Economy*; Vethake's *Political Economy*; Carey on *Wealth*; Stephens' *Progress of Discovery and Maritime Commerce*; Heeren's *Commercial Researches*; Vincent's *Commerce of the Ancients*; McGregor's *Commercial Legislation*; Annual Reports of American and Contemporary Governments.

“It should be required from the professorship to prepare and deliver twelve public lectures each year, free to every one, upon subjects determined in its organization. For example, upon the ‘*Sources of National Wealth and Decline*,’ on the ‘*History and Progress of Commerce*,’ on the ‘*Foreign Commercial Relations of the United States, including our Treaties*,’ upon ‘*Finance*,’ on the ‘*Results of Agriculture and the Advancement of Agricultural Classes*,’ on ‘*Manufactures*,’ the

'*Science of Statistics*;' the '*Geography of Commerce*;' the '*Commodities of Commerce*;' the '*Literature of Commerce*;' &c., &c. The lectures to be of a practical character, and perhaps to be published eventually, under the auspices of the University, as one of its text-books, and as a work to be used and consulted in every part of the Union. Such a volume, prepared with all the light afforded in the libraries and collections of the university, would be complete."

In January, 1848, the Hon. Maunsel White, an esteemed and wealthy merchant of New Orleans, whose experiences and connexions run back anterior to the American history of the city, entertaining the subject as one of wide public interest, and calculated to elevate the profession to which he was so much indebted, addressed a letter to the board of administrators of the university, (being himself a member,) announcing his determination to secure an endowment,* &c.

To use his own language, (Review, vol. V, p. 240:)

"The object of this movement is to secure an endowment for a *Chair of Commerce, Public Economy and Statistics*, in the University. These matters have not, so far as I am informed, been made the subject of especial study in any of the institutions of this country or of Europe. The States of the German Zoll Verein, indeed, as we learn by the foreign mail of to day, constitute an exception, as they intend a '*Commercial University*,' for merchants, manufacturers, and commercial lawyers.

"It will be the proud satisfaction of *New Orleans* to have taken the lead of all other commercial cities of the world in this matter, and it may be confidently affirmed that this important department of knowledge could be prosecuted with higher success and efficiency in no other city. To her commerce is the all and all of prosperity, and she the spontaneous, youthful, yet vigorous offspring.

"A plan for the above professorship has been drawn out, at my request, by Mr. De Bow, a synopsis of which is annexed."

The professorship having been established by the board accepting the liberal donation of Colonel White, that body proceeded at once to the election of a professor, and selected the editor of the Review, without his knowledge or solicitation, but upon the nomination of the founder of the chair.

Gratified by such a mark of favor, he entered upon the preparation of a course of twenty-four lectures, which were completed during the summer of 1848, and announced in a public programme for the coming winter. The introductory lecture of the course was delivered in the hall of the old State House and printed in the papers of the day. The sudden appearance of epidemic cholera in New Orleans, and the ravages of that terrible scourge, (who can ever forget them,) interrupted the lectures at this point, and broke up the class. As the programme of this course may, perhaps, be of some use to those who are laboring in similar fields, it is given here entire. It

* Col. White had, twelve months before, advocated this chair in a letter to the editor of the Review, published in the March No., 1847.

is especially recommended to the Young Mens' Commercial Associations in the several cities when sketching their course of winter lectures.

Programme of a course of lectures.

LECTURE I.—*Introductory and Public.—Spirit of Ancient and Modern Education*; doctrine of practical results; diffusion of knowledge; the practical sciences; relative educational advantages at the north and south; in New Orleans; character of the University of Louisiana; commercial education; outlines of the history of political economy; commerce and statistics; the mercantile character, etc., etc.

DEPARTMENT OF POLITICAL ECONOMY.

LECTURE II.—*Rise and Progress of the Science of Political Economy*, from its origin to the publication of the *Wealth of Nations*, and since that period.

LECTURE III.—*Productive Powers of Labor*, and the order of distributing its produce throughout society; division of labor; origin and use of money; real and nominal prices of commodities; wages, stock, rent of lands, etc., etc.

LECTURE IV.—*Nature, Accumulation, and Employment of Stock*; accumulation of capital; productive and unproductive labor; interest; employment of capital, etc.

LECTURE V.—*Progress of Opulence in different Nations*; ancient and modern agriculture; rise and progress of cities, etc.

LECTURE VI.—*The Mercantile Systems*; restraints upon importation; drawback; bounties; treaties of commerce; colonies, etc., etc. Agricultural systems.

LECTURE VII.—*Revenue*; varieties of taxes; subjects of taxation; imposts; how taxes fall? who pays them? proper sources of revenue; what the State should do, etc.

LECTURE VIII.—*Sources of Public Wealth*; what is public wealth? how can the government promote it? constant and perplexed legislation; the natural state of things; growth of the various branches of industry; influence of free governments, etc.

LECTURE IX.—*Growth of the United States*, in territory, colonization, and formation of States; present population of the Union; the future of the United States.

DEPARTMENT OF COMMERCE.

LECTURE X.—*Ancient Commerce*; rise and progress of commerce, and the commercial nations of antiquity; principles of ancient commerce.

LECTURE XI.—*Commerce of the world from the first to the fifth century after the Christian era*; character of the fifth century.

LECTURE XII.—*Commerce from the fifth to the tenth century*; early French, Spanish, Danish, and Saxon commerce.

LECTURE XIII.—*Commerce from the tenth to the fifteenth century*; Venice, Genoa, Pisa; the Crusades; chivalry; the early English commerce; discovery of America.

LECTURE XIV.—*Commerce, from the fifteenth to the nineteenth century*; colonization of the New World; growth of European commerce; rise of the commercial classes, etc., etc.

LECTURE XV.—*The Present Commercial World*, embracing a review of the character, position, advantages, and comparative rank of all nations in regard to commerce, etc.

LECTURE XVI.—*Navigation and inter-communication, shipping, canals, railroads, and other transportation*, etc.

LECTURE XVII.—*Progress of American Commerce*; its extent; the nations with which we trade; imports and exports from and to all nations; commercial legislation; American cities.

LECTURE XVIII.—*Treaties and Tariffs*; such general principles of international and municipal law as most interest and relate to commerce; commercial codes.

LECTURE XIX.—*Banks and finances, exchanges, public debt*, etc.

AGRICULTURE AND MANUFACTURES.

LECTURE XX.—*Origin and Progress of Agriculture*; the agricultural classes; agricultural products; comparative agricultural advantages of different nations; American agriculture.

LECTURE XXI.—*Origin and Progress of Manufactures*; the manufacturing classes; American manufactures and their growth; advantages of manufactures, and their extension throughout the southern and western States of the Union.

DEPARTMENT OF STATISTICS.

LECTURE XXII.—*The Science of Statistics*; its history; its advantages in sound legislation, and in contributing to the improvement of society.

LECTURE XXIII.—*Same subject continued* in connexion with national censuses and the proper understanding of the condition of the people in all countries; applications of political arithmetic.

PUBLIC LECTURE.—CONCLUSION.

LECTURE XXIV.—*Population*; populousness of various countries; laws of population; whether ever too rapid; its advances in the United States since its discovery; prospect of future population of the United States; does population press upon the means of support? etc., etc.

If nothing has been done for several years in the professorship, there are reasons satisfactory enough. The literary branches of the university, established under the sanction of the Constitution, and promising at its inception to be a favorite of the legislature, came all at once to be placed under its ban. The building intended for the use of these branches was commenced, but remains to the present moment unfinished and untenable. The action of the administration grew slow and constantly interrupted. The endowment was not immediately available upon terms that would be permanently advantageous to the university. *In short, the circumstances of the university were not auspicious for carrying out the purposes of the professorship.* We are glad to hear that they are improving. The new board is said to be a practical and energetic one. It will be in their power to do much for Louisiana and New Orleans. They will receive the right hand of all good men.

We close with two extracts more from our earlier papers upon this subject:

“Is there nothing in the nature and character of mercantile pursuits worthy of illustration by science and letters, and capable of being advanced by the deductions of philosophy and the results of enlightened experience? Is the merchant *born*, or is he *made* by the slow and patient operations of thought, recognizing the most liberal, enlarged, and enlightened views? The mere trader and peddler are *born*, and natural cunning and cupidity may urge them into opulence, without the intervention of any teachings, or a single liberal sentiment. It was this peddler enterprise which made the proud Earl Warwick say: ‘I like not, man, the trader spirit, the spirit that cringes and higgles and splits straws for *pence*, and roasts eggs by other men’s blazing rafters.’ The craven spirit of such men is well rebuked by Burke, who claims their ledgers as their bibles,

their *iron chests* as their altars, and their *money* as their God! The true merchant scorns the association of such men. He looks for his bright exemplars to the Roscoes and Medicis of the world, and cherishes that high purpose, that noble resolve, those liberal and enlightened sentiments, which make the merchant in the most unlimited sense the man, the citizen, the patriot, the public benefactor.

“ ‘Undimm’d the *man* should thro’ the trader shine,
And show the soul unlabel’d by his craft.’ ”

“In New Orleans, too—a city more strictly *commercial*, perhaps, than any other upon the face of the earth, which has sprung up, as it were, among the marshes of the Mississippi, an infant Hercules, feeding, growing, and enlarging upon TRADE, and incapable of a single breath without the workings of its great arteries, stretching out its broad arms and drawing in the wealth, resources, and power of an empire, challenging in its march to greatness, and threatening to outstrip every other commercial mart upon the continent—in New Orleans is the position of the merchant classes deserving of highest consideration.”

RED RIVER RAFT.

THE GREAT RAFT OF THE RED RIVER AND ITS REMOVAL.—As this subject is not generally known and understood, I ask a place in your Review for it, and though not very accurate it may be sufficiently so for general information. How and when it first originated, what have been its consequences and what they may reasonably be expected to be on the removal, has in its importance enough to justify this attempt at information. The raft is an accumulation of trees, logs, and drift, extending over the surface of the river from bank to bank, and for miles in extent, so close and compact as to be walked over without wetting the feet. Broom-straw, willow, and other small bushes are growing out of the rich alluvial earth that cover the logs, so that it presents the appearance of an old worn-out field that has been abandoned to grow up again. The current, if any under so much impediment, is barely perceptible. Such a mass of decayed and decaying wood is malarious in the extreme, and its steady upward march at about one and a half miles a year is driving a scanty population before it.

At what time it commenced is unknown and must remain so; but, judging from its annual decay, breaking off and floating away below, gives probability to the conjecture that it was more than four hundred years ago. The Caddo In-

dians say that the residence of their immediate ancestors was on Caddo prairie, now the bottom of the present Caddo lake, and this is at the upper end of the obstruction. This open lake, about one and a half miles in width and thirty or forty long, is about eight feet in depth under general winter water and the passway for the steamboats. When the raft was first seen by the earliest white settlers is and will also remain unknown. When Alexandria and Natchitoches, one hundred miles above it, were first settled, the raft was above them, and this latter Spanish town was founded as early as the city of Philadelphia. When operations were commenced by the United States engineers, in 1833, under Captain Shreeve, its lower end was at the mouth of the Loggy bayou, which is the outlet of Lakes Bodeau and Bistmon, and near four hundred miles above the mouth of the river and the commencement of the obstruction, all below having rotted and passed away. We are not in so much doubt, however, how the raft was first created. The cause, it seems generally agreed, was, that the waters of the Mississippi being high from a freshet when the Red river was low, its waters backed up and made still-water at its mouth. The rafts of trees, logs and drift that came down the Red river were stopped by the ceasing of its current in this still-water, and spread over the surface from bank to bank and there accumulated. When the Mississippi water fell, all this accumulated drift over so much surface, seeking passage out at the same time, united and tangled from shore to shore and stopped and made a jam. The mass of imbedded logs near the mouth and very many places above, that show themselves in low stages of the river, make this certain. The jam once established, as nothing could pass, increased each year according as the extent of the annual freshets brought down more trees and drift, and this accumulation probably was at about the rate of one and a half miles a year, while after a time from decay it broke away below, drifted off and made a clear river at something like the average of about one-half that space. When surveyed for the operations that were begun in 1833, its length was a little under one hundred and thirty miles. Since 1833 it has extended to about thirty miles above where it ended at that time. The sap woods of the swamp under the alternations of wet and dry were not many years in rotting, and when completely rotted broke away and past down the stream so as to make again an open river. The annual increase, exceeding the decrease, gave length to it and advanced it into the upper country; and if these were the days of M. Van Winkle, and we would wait about two hundred

years, it would give us navigation up to Fulton, near the natural obstruction known as the White Oak Shoals, and about eight hundred miles above its mouth.

The United States government, under Captain Shreeve, commenced operations in 1833 on the raft, then one hundred and twenty-eight miles long and four hundred above the original obstruction. The lower part of the raft was then in such a state of decay, and yielded so readily to the grapplings of the steamer, that about one hundred miles were pulled away the first season, and good navigation established through it up to Coates' bluff, now the flourishing town of Shreeveport, so called in compliment to that officer. This, so lately an uninhabited bluff, is the commercial inlet to the comforts and conveniences of about three hundred families, and it ships more than 60,000 bales of cotton this year. All that yet remains of this formidable barrier may be about fifteen miles in length. The raft here, being of recent formation, does not give the benefit of being rotted, and has, therefore, to be dismembered by the axe and the saw, and the force of steam is necessary to pull it apart. The distance is short but the labor is much greater. It is speaking from report to say the United States engineer, now engaged in this great work, has avoided this labor by selecting one of the three bayous that the obstruction has forced the river through, and proposes opening it into Caddo lake, (the only navigation when there is any,) and through that into the river again, about thirty miles below the raft and near to the town of Shreeveport. It is a natural inquiry, Will the river, after being opened, keep open? and the answer is, certainly. There is nothing to make this river an exception to all others. What the broad stream brings the broad stream will carry on. The error heretofore has been to act on the supposition that the waters of a creek would carry the drift of a river three or four times its size. The open river above the raft for about three hundred miles pours down a stream between five and six hundred feet wide, and brings its string of logs with it. Was it reasonable to expect that either of its three outlets or bayous, not containing more than a fourth of the space or quantity, could give a passage for them through it? To a common understanding the impression would be that it would not, and especially with the snags and hangs usual in an entirely unimproved navigation. The upper mouth wide enough to receive the whole contents of the river, and with a similar speed of current, and with a steamer employed for some years to assist the varying operations of the stream, would seem to promise all that is wanted. The greatness of the enter-

prise warrants any trouble in reason it may give for a few years to have such a stream with so much of future promise kept open and in order.

The Red river extends a distance of about one thousand seven hundred miles, through the most fertile body of lands in the United States, and all below the latitude of 35°, and which, within no long period, will be inhabited by a dense population, and its waters freighted with the produce of its unlimited fine range for cattle and hogs, and also with cotton, wheat and other grains, and the varied produce that belong to so much fertility and such latitude. These advantages attend the removal of the raft. Let us look a moment at the disastrous consequences of leaving the obstruction that has already and is now taking place. Caddo prairie, already described and formerly settled, is now a lake, and this is but a small portion of the lands similarly situated. The comfortable houses of many a family is now a noxious lake. Its mischievous upward march is most strikingly seen from the eminences that skirt the swamp above this. You there see under you, as I have done, perhaps one hundred thousand acres of timber in all its various stages of decay, those nearest the obstruction showing nothing but their rotted trunks standing, those next having a part of their limbs on, and those above that dead and dying with their leaves yet on. The usual winter water, at seventy miles above the head of the raft, now backs up and covers the land about four feet higher than it did twenty years ago, and many at that distance have been obliged to abandon their farms. It requires but little prophecy to see what must soon be the condition of the upper settlers. Their farms will be lakes, and they must pull up their tent pins and march.

FRANCE IN 1855.

We are indebted to the Paris correspondent of the National Intelligencer for the following :

M. Legoyt, of the Bureau of Statistics attached to the Ministry of Agriculture and Commerce, has published a volume of French statistics, being the continuation of a similar volume published under government auspices in 1837.

The total surface of continental France is 52,305,744 hectares, (129,250,387 acres;) of which about 49,300,000 hectares (121,823,028 acres) are taxable, and the balance, 7,427,359 acres, consisting principally of public highways and unproductive domains, are not taxable. The quantity of arable

land is estimated at about 25,500,000 hectares, (63,011,909 acres;) of meadow at about 5,000,000, (12,355,277 acres;) of vineyard at about 2,000,000, (4,942,111 acres;) of orchards, nurseries, and gardens about 600,000 hectares, (1,482,633 acres.) It is calculated that France, in an average year of production, produces three hectolitres ($8\frac{1}{2}$ bushels) of grains and one hectolitre (22 gallons) of wine for each inhabitant. Upwards of 7,000,000 of hectares, or more than one-eighth of the whole superficies of France still remains waste land, common pasture, heath, or uncertain land. The average quantity of grain produced per hectare in France is thirteen hectolitres, ($35\frac{1}{2}$ bushels,) which is equivalent to fourteen and a half bushels per acre; while in England, says a writer in the *Constitutionnel*, the production is on an average twenty hectolitres per hectare, ($22\frac{1}{2}$ bushels per acre.)

The number of houses of all sorts in France, including dwellings, warehouses, shops, factories—in fine, all constructions used for habitations, commerce, or manufacture—is, or was in 1846, the date of the last enumeration, 7,462,545; presenting in the aggregate 44,283,363 taxable doors and windows, and covering about 250,000 hectares (617,764 acres) of surface.

France is notoriously the country of small land owners. The minute subdivisions of territorial property is generally cited as one of the most efficient causes of the inferiority of French agriculture when compared with that of most other countries of Europe. The parcels of land are so small as to be generally insufficient for the support of a family, or to admit of the smallest outlay of capital or manure, improved instruments of husbandry, or superior systems of agriculture. Accordingly we find territorial property in France divided into 126,210,194 lots or parcels; which, considered in connexion with the quantity of arable land above given for all France, exhibits as the average size of cultivated lots in this country just *half an acre*. These lots are owned by 13,122,758 proprietors. Thus each proprietor owns on an average about $4\frac{1}{2}$ acres of arable land; and these $4\frac{1}{2}$ acres are cut up into nine distinct lots. These lots are often separated from each other by considerable distance; so that a land-owner who would visit the whole of his domain of $4\frac{1}{2}$ acres on the same day must spend nearly his whole time in so doing. The evil of minute subdivision of territorial property, great as it has ever been since the first revolution, would seem to be increasing. In 1827 the number of land-owners was 11,053,702; in 1842 it was 11,511,000; in 1854, as above stated, they numbered 13,122,758, or $36\frac{1}{2}$ per cent. of the whole popula-

tion. It is perhaps true, as has been suggested, that the remarkable increase in the number of land-owners since 1842 is attributable in part to the increased demand for building lots required by progressive agriculture and manufactures. From 1815 to 1846 the number of taxable houses increased from 5,564,000 to the above-given figure of 7,462,545.

France possesses, in five great fluvial basins, an aggregate length of 8,817 kilometres, (5,478½ miles) of navigable rivers; 97 canals, of which the aggregate length is 4,715 kilometres, (2,929½ miles;) 654 imperial roads, of an aggregate length of 36,038 kilometres, (22,393 miles;) 1,694 departmental roads, of an aggregate length of 45,626 kilometres, (27,108 miles;) 69 strategic roads, of an aggregate length of 1,463 kilometres, (909 miles;) and 284,737 vicinal or cross roads, of an aggregate length of 558,441 kilometres, (347,000 miles.) The number of bridges in France having a length each of twenty-two yards or more is 1,914, supported upon a total number of 8,000 arches on trusses.

With regard to the railroads of the empire, Mr. Legoyt's volume does not give information up to the present moment. But, before dismissing this portion of the statistics, I will give, from an official report published in the *Moniteur*, the following items concerning them. The total length of railroad opened and in use in France at this time is 4,975 kilometres, (3,091½ miles,) made up of the following roads of the length annexed:

Names.	Kilometres.	Miles.
Northern Railroad	707	439½
Anzin and Somain	19	11¾
Paris and Strasbourg	863	536
Montereau and Troyes.....	100	62
Western Railway.....	258	160½
Paris and Rouen	139	86½
Rouen and Havre.....	92	57½
Rouen and Dieppe.....	51	31½
Paris and Orsay	25	15½
Grand Central.....	215	133½
Orleans and branches.....	1,155	717½
Paris and Lyons.....	555	344½
Lyons and Mediterranean.....	528	328
Southern Railway.....	251	156
Ceinture (around Paris).....	17	10½
Total	4,975	3,091½

The most profitable roads are the Paris and Lyons road, of which the gross receipts during the six months were 35,051 francs per kilometre, the Grand Central 31,914 francs per

kilometre, and the Northern Railway 30,524 francs per kilometre.

There are upwards of five thousand kilometres more of railways in France now in process of construction, or conceded and soon to be commenced.

As for the population of France, the census during the last fifty years establishes a very satisfactory progression. In the year 1700, under Louis XIV., it was 19,669,000; in 1784, under Louis XVI., it was 24,800,000; the increase being only a little upwards of five millions in the space of eighty-four years. In 1851 the population had swollen to 35,783,170; showing since 1784, a period of sixty-six years, an augmentation of eleven millions. The *Constitutionnel*, which now-a-days never lets slip an opportunity to snap at the defunct republic of 1848, states a curious fact touching the progress of the population, and, whether rightly or wrongly, attributes it to the republic, with a sneer at its pretension to have been instituted for the people's good. The fact is, says the *Constitutionnel*, that in five years, from 1841 to 1846, the population of France increased by 1,171,000 inhabitants; and in five years, from 1846 to 1851, (embracing the republic,) the increase was only 483,000.

Of the 35,783,170 population in 1851, the census shows 20,351,628 engaged in agriculture; 2,094,371 engaged in manufactures; 7,810,144 artisans, mechanics, and tradesmen; 4,000,000 nearly members of the liberal professions; 753,505 domestic servants; and 782,496 mendicants, invalids, persons supported by public charity, and vagabonds.

There were 44,970 insane persons, 29,512 deaf and dumb, 37,662 blind, 75,063 blind of one eye, 42,384 afflicted with goitre, 44,619 hump-backed, 20,378 lame, and 22,547 club-footed.

In France the annual number of births has been for a long time stationary at about 960,000 per annum. This gives one birth for 37.48 inhabitants. The number of deaths, not including the still-born, is 811,000, or about one for forty-three inhabitants. The number of marriages is 277,000 per annum, or one for 128.20 inhabitants.

FACTS UPON YELLOW FEVER—ITS PROGRESS NORTHWARD.

By DR. NOTT, OF MOBILE.*

1st. *Its origin*.—Whether this epidemic was really imported from Africa or not, is a point which cannot be settled from any data yet made public, and I shall not offer you any

* In a letter to a citizen of the District of Columbia.

speculations on it. One fact, however, is certain, that this disease has travelled steadily on, since its first appearance in Rio Janeiro five years ago, along the Caribbean gulf and Atlantic coasts, until it has at length reached Norfolk. No mortal of our day is endowed with the spirit of prophecy; but still we can often, from the lights of history and observation, predict with tolerable certainty coming events; and it was on such data that I ventured to foretell that yellow fever would go as far as Norfolk, which is about the boundary of the yellow fever latitude, and also suggested the strong probability that it would visit our northern cities, where it does occur at long intervals. Now, the grounds upon which I made these predictions were as follows: Yellow fever has at long intervals, not only in the Mediterranean, along the Spanish and French coasts, but in in the United States, (about fifty years ago,) taken on this *travelling* character. About the time alluded to, yellow fever extended from southern ports to Norfolk, and thence to *Winchester* in the interior; to Philadelphia, to New York, and thence to Catskill, on the North river, and to Hartford and Middletown. The epidemic in question had steadily progressed for three years, from Rio to Mobile, and on to Key West; and with all these facts before me I did not hazard much in predicting that its progress was onward in the direction it had been travelling.

Type of the disease.—Few men in the United States have seen more of yellow fever than I have, and I have no hesitation in saying that this is substantially the same disease as the yellow fever which occurred in Philadelphia in 1793, and which has appeared from time to time since. It is the fact with typhoid fever, cholera, plague, scarlet fever, small-pox, and all epidemic diseases, that they appear in different *grades* of violence at different times, and occasionally have a greater tendency to travel over a large extent of country. This has been the case with the yellow fever in question; but its mode of attack, its course of symptoms, including yellow skin and black vomit, its average duration, &c., are the same as other yellow fevers, and, though it may have been somewhat more virulent, it is still the same disease.

Contagiousness.—This is a knotty point, and I have not space to do more than express my conclusions. Under the term contagion are compounded two distinct questions, viz: *contagiousness proper*, or the communication directly of yellow fever from one human subject to another; and, secondly, the *portability* of the cause or germ by vessels from one port to another. Although my mind leans at present towards a belief in the contagiousness of *this* disease in certain in-

stances, I still doubt, and my judgment is in suspense; but, with regard to its *portability* by vessels from place to place and by railroads, I do not see how any human being familiar with its history can doubt, and I should advise our northern friends to quarantine rigidly against it. *The disease has gone to every point within a certain distance of the gulf which was frequented by steamboats and railroad cars*, and I believe would have entered New York in 1853 had it not been stopped at the quarantine.

Treatment.—This is too complicated a point to touch in a letter; but I must correct the error which you quote from the newspapers as attributed to me, viz: “He told our physicians not to treat it with medicine. Drugs were tried, and every patient treated with them died. He advised water alone, internally and externally.” Now, sir, such language was never used by me. It is nevertheless perfectly true that yellow fever, as we see it at the south, is a disease of low action, which does not bear active medication. Bleeding and active purgation or emetics are worse than useless, and more good is effected by good nursing and constant attention to varying symptoms than by violent remedies. Cold drinks, as ice-water, lemonade, and also cold sponging in the hot stage, are all very refreshing and proper, but cold water has no specific virtue in controlling this Herculean disease. It is a remarkable fact that after one of these great epidemics it is hard to find a doctor who has lost any patients, and yet about twenty per cent. of those attacked have been numbered with the dead. Epidemics are great scourges sent by the Almighty; and not only are we without remedies against them, but in the face of the most opposite plans of treatment the per centage of deaths continues about the same in all times and in all places. The discovery of vaccination alone has been heralded as a triumph, and I see that a distinguished physician in Europe has just published a book to prove that vaccination is a great curse, which leaves in its train consumption and scrofula.

Very respectfully and truly your friend,

J. C. NOTT, M. D.

MILITARY DEFENCES OF VIRGINIA—NO. 2.*

WHAT THE SOUTH IS THINKING AND SAYING ABOUT THE ENCRAGEMENTS OF THE NORTH.

Long life to the Union! may its shadow never be less! It was designed to “establish justice, ensure domestic tranquillity, provide for the common defence, promote the general

* Richmond Enquirer, August 10.

welfare, and secure the blessings of liberty to ourselves and our posterity," and, therefore, we love and cherish it. It was the work of demi-gods, and hence we revere it.

But we have fallen upon evil times. There is reason to apprehend that it is to be perverted from its noble ends and used for far different purposes. If it pass under the control of fanaticism, then will justice be overthrown rather than established, domestic tranquillity give place to intestine convulsions, the common defence and general welfare be disregarded, and the blessings of liberty lost to ourselves and our posterity. Anti-slavery agitation threatens to accomplish these fell purposes. It was a union of slave States in its birth; and when the institution of slavery comes to be a source of inequality and injustice, the Union, as originally constituted, will have ceased to exist.

That condition, we fear, is already in sight, and nothing can avert it but the gallant stand for the Constitution made by northern men. We of the south must be, in the main, passive spectators of the strife. All that we can do is to save our friends from reproach by the moderation of our conduct, and to strengthen them by the firmness of our attitude. This is all we can do for the Union; but there is much to be done for ourselves, and but little time to perform it.

In a few years Kansas will probably ask admission into the Union as a slave State, and may be refused. It needs but freesoil predominance in the House of Representatives to achieve this end. If refused admission into this Union, she will undoubtedly be received by another, and the United States, south, will begin their career. This proposition is too clear for argument. Nothing but rank cowardice could induce the south to acquiesce in the exclusion of a slave State on the score of slavery. We assume, therefore, that the south will not acquiesce, and consequently we fear that in a few years Mason's and Dixon's line may be the boundary of foreign powers.

The possibility of this event creates grave responsibilities. Virginia will be a frontier State. Should war unhappily occur between the two republics, she will receive the first shock. The bare possibility of this thing demands instant preparation, as far as it may be made without hastening the event, and with strict fidelity to the Constitution.

If constitutional retaliation can be devised, and will probably be effectual, let us try it, but let not the failure of constitutional expedients find us unprepared for the change in our political relations that must ensue.

The next legislature will find the commonwealth threatened

with this contingency, and in the main unprepared for it. They will find her without an organized military force, save a few companies of volunteers, and without the means of concentrating troops with the rapidity indispensable to modern warfare. The Constitution prevents us from keeping troops or ships of war, but it does not prohibit a well organized militia, or a judicious system of military communications.

The legislature will be faithless to its gravest duties if it adjourn without organizing the militia and providing for the completion of such lines of improvement as will subserve military as well as commercial purposes.

We are civilians, and wholly incompetent to plan a system of military defences for the State, but there are some general considerations dictated by common sense, which even civilians may present without presumption.

It is generally conceded that a whole population cannot be drilled as soldiers. The abandonment of the old militia musters shows the opinion of our people on this point. Nothing, therefore, remains but to classify the adult male population and to drill such portion as may be withdrawn from their usual avocation without public detriment.

According to the census returns and the lists of tithables, there are not less than 200,000 fighting men in the State. One-tenth of these might be drilled without injury to themselves or to the public.

We see no reason why each of the existing regiments, increased in numbers to 200, might not be required to furnish a company of volunteers, or of draughted men at their option. These companies should be armed, assembled periodically at the regimental muster grounds and drilled.

The graduates of the Military Institute might be required to conduct these drills, instead of teaching school, as they are now required to do.

The companies might be organized into regiments, brigades, and divisions, and into infantry, artillery, and cavalry.

The advantages of such a system would be that, while no man would be carried out of his county, or injuriously withdrawn from his business, yet every county in the State, except some of the smallest, would have one or more military companies, ready to assemble at a moment's warning, to suppress insurrection or for police purposes. The State would possess a corps of 20,000 men, armed, organized, and drilled, and capable of being assembled in whole or in part, at short notice, for the purpose of offensive or defensive warfare, without seriously interfering with the ordinary pursuits of the people at large, or burdening one section more than another.

We know of no objection that can be urged to such an organization, except the difficulty of assembling the companies for battalion drill. This difficulty is incident to every system except the impracticable and exploded one of drilling the whole adult population. The moment this is dropped and the principle of classification adopted, it becomes difficult to assemble the requisite number of men without transporting them a considerable distance. Nevertheless the difficulty is not insurmountable. Where the population is dense it does not exist, and where the companies are widely dispersed, they should not be assembled so often as in other cases. The service would not be harder than in the present volunteer companies; and, therefore, the men might be kept enrolled several years, and by the periodical discharge of a certain proportion, and the incorporation of an equal number of new men, it would be rendered still easier.

The present volunteer companies would form a part of the proposed force, and where such a company was formed, of course drafting would not be required.

By some such system, an *elite* corps would be always at command to suppress insurrection, repel invasion, or act offensively, if required.

Only one thing more would then be needed for the present. Armies without the means of concentration are useless, and in modern warfare this is effected by steam, and with a rapidity not dreamed of thirty years ago. Twenty thousand men, dispersed through the State, would be available to suppress insurrection, but not to repel invasion, unless other means of transportation than their own legs be provided. A system of military communication is therefore indispensable to the safety of the State, and should be looked to forthwith.

To our unsophisticated view, the commercial lines already marked out are in the main such routes as military defence requires. We call attention to the map of Virginia. It will be found that the northern frontier presents what in military parlance we believe is called a salient angle. The northwestern face of this angle is covered by the Ohio, and the northeastern, to some extent, by the Potomac. Neither of these rivers could be crossed by an invading army if well defended, but the space between them, constituting the point of the angle and a portion of its right face, has no such protection. Moreover, the ranges of mountains and the rivers run from the centre of the State towards this open space, and thus present avenues of approach instead of lines of defence. Here, then, is the weak point on the northern frontier. On the east we are wholly exposed to maritime invasion. An

enemy, master of the ocean, could land where he likes. There is but one protected point, and that is Hampton Roads. A fleet entering the capes, with an army on board, might land it at Lynnhaven bay, within twelve miles of Norfolk, or in York river, within forty miles of Richmond.

Fortunately for us, however, the railroads already constructed or under contract radiate from these two points to the interior, and need but completion to afford the desirable means of concentrating a force at either point. We should say, then, complete without delay the Petersburg and Norfolk and the Richmond and York River roads, for they are military roads of the first importance.

On the north matters are not so favorably situated, but still even here many of the roads tend in the right direction. The road from Harper's Ferry to Wheeling, partly on our own and partly on friendly soil, furnishes a means of communication from one flank to the other of the weak position on the northern frontier. The Parkersburg branch runs off in a southwesterly direction, the Hampshire and Loudon road to the southeast, and the Harper's Ferry and Charlestown road, together with the McAdamized road from the latter place to Staunton, leads off to the south.

But it will be observed that two-thirds of the trans-Alleghany region is wholly insulated, that it has no communication with the northern frontier, except a precarious one up the Ohio, and none with eastern Virginia. Yet this very region is the seat of a large proportion of the military strength of the State, containing, as it does, a majority of the white population. It is as if we had a citadel filled with men, and outworks feebly manned, with no communication from one to the other. The Covington and Ohio road pierces through the heart of this region, and will, when finished, pour its military strength either upon the seaboard, by the way of Staunton and Richmond, or upon the northern frontier, by the way of Staunton and Harper's Ferry.

It is obvious, then, at a glance, that the most important military road in the State is the Covington and Ohio road, for it not only develops the strength of the trans-Alleghany region of our own State, but connects us with Kentucky. So long, therefore, as this road is unfinished the right arm of the State may be regarded as paralyzed. It would be entirely useless to raise an army on the banks of the Kanawha to succor the exposed northern frontier or the defenceless seaboard, for the campaign would be decided before it could extricate itself from the mountain ranges east of that river. The completion of the Covington and Ohio road, and the filling up

the gaps between Staunton and Harper's Ferry, seem indispensably necessary to place the military defences of the State on a respectable footing. The Lynchburg and Charlottesville road is also important, as facilitating the connexion of the northern frontier with the southwest.

We call upon the legislature to consider these matters, and to give us a military force and the means of using it. Let it be done calmly, and without threat or menace. Avoid every measure calculated to wound our friends, but omit nothing necessary for our own defence.

Practical measures, and not abstract resolutions, are what the people wish and expect. No exception can be taken to the measures we have indicated, for they are strictly constitutional and eminently proper. Carry them out, and we shall be ready for whatever fate has in store for us.

SOUTHERN STATISTICS—AN ERROR CORRECTED.

The following is from the pen of an able writer in South Carolina, which, on many occasions, has adorned our pages. The justice of the reproof which is given us is most honestly admitted. It was by accident that the paragraph alluded to escaped attention until too late for correction. Those who know us know well that we have demonstrated, in a hundred places through the Review, the very reverse of what is stated in the Illinois article. In extenuation of this one sin will not others be as liberal as our reviewer, and set up, as even juries and stern judges will, the previous good conduct of the delinquent. The rock of safety will be here.

At a time when all the world seems leagued against us, (us of the southern United States,) when we are preached to, preached at, and preached against by every meddling Constitution tinker, black and white, male and female, from the late John Q. Adams, Lord Brougham, and the Duchess of Sutherland, to Fred. Douglas and Lucy Stone; while Kansas, nobly struggling into existence, has first to fight her home battles against free-soil aggression, and then to be insolently told: "Present yourself as a slave State for admission to the Union and Congress will reject you." Aye, and while southern blood yet tingles with this insult, the echo of it, as it were, comes from beyond the seas, telling us how England and France, forcing poor decrepid Spain into an unwilling league, arrogantly say to us, "Cuba, you *shall not* conquer, *shall not* colonize, *shall not* purchase; now and forever it shall be to you a forbidden ground, and your southern ports shall be watched over and kept in dread by a savage negro colony let loose to murder and pillage; and you shall bear it." God help us if we *do* bear it! But at such a time as this, when southern

hearts and southern hands (now twenty years too late, and still not hopelessly too late, in resistance) should be linked in union, waiting the speedy crisis which must make us an independent nation, or else the hopeless, helpless bondslaves of our traitor brethren, how are we preparing for the question of death or life, prosperity or ruin? Quarrelling, forsooth, among ourselves, sparring for party and office, and chattering about the follies of know-nothingism, when property, liberty, life, family, and country, hang trembling in the balance. Yet a little while, and it is not too late for the south to show what she can and dare be; but, again: yet a little while, and behold her, perhaps, the unresisting trampled victim of astute cunning and impudent assumption. Again, I say, *God help us!* for even with the prospect before us thus dark and menacing, we stand like some thoughtless child with its hand upon the serpent's fang, trifling with the venom which threatens our very existence. Thus, for example, while our northern brethren slander and misrepresent us at almost every stroke of the pen, our southern editors can often find no better material to cap a column, or to fill a paragraph, than some flowers of northern rhetoric, wherewith so thickly sprinkled is the ever ready venom, that unawares the poison is inhaled, as we breathe the odor of the blossom. And thus distorted representations of truth, carelessly copied, circulate with their double distilled venom, unargued against, uncontradicted, from mansion-house to cottage; and while we attempt to close our post offices against the bold attack whose very boldness makes it less dangerous, the atmosphere of our every fireside is poisoned, our every home-hearth tainted by the insidious phrase which nobody looks for in a southern paper, nobody questions, nobody doubts; and thus falsehood on falsehood, prejudice on prejudice creeps in, and prepares the unthinking, (and how numerous are the unthinking!) to receive for truth the weightier falsehood which comes to them, as in the end it surely *does* come, a corollary to these beginnings. Who does not remember, but the other day, when the foul slanders of "Uncle Tom" were issued from the press, how many of the weak-minded among us, who had been duly paragraphed and prejudiced by inuendoes from northern journals into a proper distrust of themselves and a gentle suspicion of the fact that they might possibly indeed be cannibals and murderers instead of Christian men and women, shaking their heads with dolorous look of startled emptiness, whined out their fears that "after all there was some truth in that book," and whimpered and shuddered,

and wished that God might pity them, but they did not know whether or not they were sinning in very truth.

Why, Mr. Editor, take your child, if you chance to have one, into the corner and lecture it upon its iniquities, frightening it with its most innocent deeds, even with its virtues, and the poor little victim will come out pale and trembling, thoroughly convinced not only that the great horned devil, with hoof, tail, and claws, stands ready to catch and devour it, but that it, in its own little innocent person, most richly deserves to be thus caught and devoured by the monster. So it is with too many children of the larger growth. Tell them daily that they are living in a bedlam of sin and corruption, and at last they will believe you. There are many minds which cannot make their own conclusions, which need to be educated, need to be led, and it is a solemn duty in those undertaking to educate and to lead to note well how they read their lesson.

We have been led into these remarks, Mr. De Bow, by the fact that, on lately taking up the last (September) number of your widely-circulated Review, with a wish to once more renew our acquaintance with an old friend, from whom sorrow and adverse circumstances had of late entirely estranged us, we fell naturally upon the first article, viz: "Statistical View of the State of Illinois," which is ushered in, by a special recommendation in a foot note to your readers, as an "invaluable paper." Certainly the unsuspecting, who wish to be thought for, have a right to give themselves up here to the indolent pleasure of catching the ready-made ideas presented for their accommodation, and to believe themselves safe in your hands. A southern periodical, of long standing and large circulation, an accomplished editor of known statistical experience, all must be safe, and we may take our facts without cavil. Such, we confess, was our own feeling as we set somewhat listlessly about the pleasant task of learning, without the trouble of working out our own ideas. But one—two pages—scarcely had we fairly entered upon the article, when a sensation somewhat approaching that of an unexpected slap in the face brought us to a sudden halt at the following paragraphs:

"But it has been well said, 'It is not the immense extent of territory, happily, which constitutes the grandeur of a State; for example, the United provinces of Holland, after having thrown off the yoke of Philip II., the most powerful king of his age, sustained with advantage a contest against Louis XIV., and, having conquered vast distant provinces, has since given a new destiny and high prosperity to a small kingdom. See, also, England, who started out with a territory of less than 150,000 kilom. (square) and now rules over millions.'

"This fact is so well established as scarcely to justify being illustrated, but the remarkable results which have been obtained by the indomitable enterprise and industry of the people in an inhospitable climate and upon a flinty soil, as contrasted with those obtained in a genial climate and on a generous soil, will justify

the introduction of the following facts as to the States of Rhode Island and South Carolina, and settle beyond a cavil or a doubt the true grounds upon which a State must rely for its greatness. The manufactures of Rhode Island are more valuable than the manufactures and cotton of South Carolina. Thus—

Rhode Island manufactures	\$8,640,626
South Carolina manufactures.....	2,248,915
South Carolina raises cotton to value of.....	4,628,270

“The population of Rhode Island is but 147,545, while that of South Carolina is 668,507. The area of Rhode Island is but 1,306 square miles, while that of South Carolina is 29,000.”

Now, sir, we must do you the justice to believe that you were busy, or travelling, or indisposed, or in some other way prevented from a fair perusal of your proof-sheets. We have ourselves ere now, if we remember rightly, run the gauntlet of your statistical corrections, and acknowledged ourselves fairly chastised and honestly reproved. Most undoubtedly, if you read the above statement at all, it must have been at past the witching hour of night, when editors, like common folk, begin to wink their eyes and long for their pillows. The error of it (to use no harsher term) is too flagrant to escape any wide awake eye. I say nothing of the spirit of the remark, which shows certainly anything but kindness from the champion of the big Illinois giant, who thus singles out the weakling, South Carolina, as the object of unkind taunt, for her immense inferiority to her little Yankee sister, Rhode Island, and which points his moral by holding up said South Carolina as a warning to all lazy backsliders, in contrast to her industrious little rival, who shows us, “beyond a cavil or a doubt, the true grounds upon which a State must rely for its greatness.”

We pass over the invidiousness of the conclusion to show the insidious falsehood of the statement, or the absolute ignorance of every principle of political economy in the maker of it. “*The manufactures of Rhode Island are more valuable than the manufactures and cotton of South Carolina.*” Is the writer ignorant of the difference between a gross and a net revenue? Does the merchant of Chicago who sells \$50,000 worth of goods in the year, for which he has paid \$48,000, do a more profitable business than the neighboring farmer who sells the proceeds of his harvests for \$6,000, after paying all expenses with \$2,000? In our humble opinion, the farmer makes double the gains, and has double the income of the merchant, while, according to the reviewer’s system of calculation, the merchant has made more than eight times the profit of the farmer. It is scarcely necessary, we presume, to quote Say and Ricardo to prove that the farmer is the richer man; and yet, in our supposed case, we have the parallel fact to the one upon which the reviewer bases the superiority of Rhode Island. South Carolina, an

agricultural State, incurs, like the farmer, but small expense in the raising of her produce. Of the staple which she sells she buys nothing ; and after the expense of supporting her laborers, which is small, (their principal provisions being of home growth,) all is clear gain. Even what she manufactures brings her small expense, for she but works up her own produce, which costs her nothing, even as the farmer's wife might spin and knit him socks from his own wool. Her \$2,248,915 of manufactures, and her \$4,628,270 of cotton, give her \$6,877,185 of revenue, nearly free of expense, to say nothing of her rice and other smaller products which are in this calculation entirely ignored. On the other hand, Rhode Island, like the Chicago merchant, has begun by a large outlay. She has not only to support her laborers at an infinitely larger expense than South Carolina, but also to meet immense expense of machinery from which South Carolina is exempt ; and again to pay for the material, the cotton and the wool, which she resells in the shape of manufactures, even as the merchant paid for his goods. Does the author of Illinois statistics call all this nothing ? He seems to have imagined the cotton and wool a windfall, a dew from heaven, a costless blessing. And the machinery, does it grow on the barren rocks, like oysters, perhaps, or New England clams, to be taken for the gathering ?

We have, unfortunately, no means at hand to assist us in computing what would in truth be the net income of Rhode Island according to the reviewer's own statement of her gross income ; but we have said enough to show how grossly the south is constantly misled by the misrepresentations, wilful or careless, of those alien to her interests. And such a misrepresentation as the one in question is no trifle. It is no unusual mode of attack upon the slave States to endeavor to prove the utter worthlessness of their institutions. We are told of our poverty, our wretchedness, our incapacity for progress, and this is dinned into our ears and driven in upon our senses, until we at last (some of us, at least, the leadable portion of the community) give in to the often-repeated falsehood, and, with every blessing that *God* can shower upon a happy and prosperous people, (wanting nothing but to be let alone in the enjoyment of his gifts, undisturbed by meddling fanaticism that thinks itself wiser than *God*.) we begin to bewail our unlucky fate. We see the big horned devil with his claws and his forked tail ; and so, with our own rich and happy country to be proud of, by dint of doubting and fearing and fancying ourselves wretched, we run great risk

“ To make ourselves e'en that which most we fear.”

The south has but one resource, one hope in these times of

peril, to save her from destruction. Adopting that resource, cherishing that hope, she is invincible. An energetic consciousness of her own power is intensely necessary to that union of effort without which she falls. "A long pull, a strong pull, and a pull altogether," would give her a stand stronger than Sebastopol against the allies. Let us cease, then, to feed the weak among us with silly tales to sap our own strength, and, remembering how often "our doubts are traitors," let us carefully avoid making our own periodicals the vehicles for instilling such doubts into minds which it is the duty of these very periodicals to instruct and enlighten.

In our remarks we have limited ourselves to proving the inaccuracy of the statement upon which we have commented. We have simply proved that it is *not a fact* that the manufactures of Rhode Island are more profitable than the manufactures and cotton of Carolina. That their profits are very great we do not deny; but these profits, even were they as enormous as the reviewer has stated, could scarcely, we think, even then be considered as settling "beyond a cavil or doubt the true grounds upon which a State must rely for its greatness." We who remember the struggle for "free trade," in which the gallant little State, here placed in invidious juxtaposition with Rhode Island, took no insignificant stand, can tell something of the beginnings of those profits. We can tell how, by means of tariffs and American systems, New England manufacturers drained the pockets of southern planters, and doubt, not a little, whether such political pilfering is the true ground "on which a State must rely for its greatness." Aye, and even now, this same little Rhode Island which, like a leech, has sucked itself full from our fatness—even now, could her iniquitous schemes of abolitionism be realized, and the slaveholding south be (as in the blindness of her madness she asks that it should be) laid a desert waste, the sacrifice to her headlong fanaticism—even now, we ask, where and what would be her greatness and her profits unsupported by that south which she reviles? Will the author of "statistical views of Illinois" answer us on this point? To us it seems that without these same southern slaveholding States, without their produce, without their cotton, Rhode Island would have little to characterize her beyond "her inhospitable climate and her flinty soil." Whatever may be the conclusions on this point in the latitude of Chicago, surely *we* of southern blood and southern home, with southern duties and southern hopes, should cease to play into the hands of our enemies by helping to circulate laudations of them, at the expense at once of truth and of our own rights.

JOURNAL OF HOME AND FOREIGN COMMERCE.

COMMERCE OF THE PACIFIC.

THE SAN FRANCISCO AND SHANGHAI MAIL STEAMSHIP LINE.

One great fault which our Atlantic brethren exhibit, when speaking of the western coast of the United States, is an almost total want of knowledge of the commerce, trade, and resources of the Pacific. Dwelling contiguous to another great ocean, they appear to feel no particular desire to inquire what is going on upon the bosom of the great sea, upon a part of whose shores it is our lot to reside. California has frequently been represented in our national legislative halls as having been a constant applicant for favors, and as swallowing up a large amount of the national resources, whilst the questions, how much the wealth and enterprise of California have added to our national prosperity, how far the produce of our gold mines have sustained the tottering credit of the whole Union, and how much the facilities of our position have given and are destined to give to American commerce, if not entirely lost sight of, are treated not as being essential to the proper appreciation of the subject, but as merely involving speculations in finance.

Upon one side of the Pacific ocean there dwells a new, but energetic people, coupling the experience of age with the strength of youth, possessing untiring industry, great adaptation to every variety of pursuit, and a nautical skill which must ere long take the palm from the oldest and most powerful maritime nation; upon the other side exists the oldest civilization on earth, a very high degree of industry, deficient, however, in the method by which inventions and discoveries are made, and a great fondness for commercial pursuits, which is only limited by imperfect navigation and a very great inferiority in their naval architecture. To connect these two nations, there was introduced into the House of Representatives, during the last Congress, a bill to provide for the establishment of a mail steamship line between San Francisco and Shanghai. The advantages of such a communication were well urged by the representatives from this State, and an unanswerable array of facts, figures, and statistics set forth, but altogether without success. It is to be hoped that during the coming session the subject may again engage the attention of our delegation, and that being brought forward at a more propitious moment, Congress will be inclined to give a more favorable hearing to the case.

Reports to Congress and to the British House of Commons

afford elaborate statistics of the comparative commerce of the United States and England with China, and from these it appears that at present the balance of trade between the two last is vastly in favor of England, whilst *ours*, yet in its infancy, presents an entirely different aspect, having a wide margin for the enterprise of our merchants. British trade depends at present upon the capacity of China to pay in *cash*, while with us they can yet for a long time pay in goods and products of their own. The English trade cannot long continue, since all the imports for Chinese consumption, and all, or nearly all, the freights are earned by English or American vessels. Thus it would appear that we are better circumstanced than the English; and so long as our population and increase are at a more rapid rate than those of any other country must our capacity for greater exports and imports increase.

The advantages which San Francisco possesses from its position in augmenting the trade between the two countries is very great. Situated upon the same ocean, the loss of time, the expense, and the dangers attendant upon a voyage round the capes is avoided, and such articles as would so deteriorate as to become almost valueless after a long voyage through the various temperatures passed through by ships bound round the Horn or Cape of Good Hope might safely be shipped from our eastern ports. Instead of sailing from eighteen to twenty thousand miles to reach a market, the distance between New York and Shanghae would be reduced to eight or ten thousand. Add to this the immense advantage that would be gained by our merchants from the early intelligence they would receive of the wants and demands of distant markets, whereby they might anticipate the supplies of all other maritime countries. All the information received by our merchants *now* comes by way of England, giving to shippers there an advantage of at least ten days. Should this mail route be established, commercial intelligence would reach New York more than ten days earlier than the same information could arrive at Liverpool by the present English overland mail route. The quickness with which such intelligence could be conveyed would serve to multiply commercial transactions, and diminish the risk attending them, inasmuch as our merchants will be enabled to improve the first favorable turn in the market. Since the settlement of California the commerce between the United States and China has been more than doubled. During nearly the whole of this period, too, it will be recollected, China has been convulsed with civil war, and her usual trade, foreign and domestic, has been almost broken up; still under all difficulties we have been gradually increasing our trade with that country, and gradu-

COMMERCE OF MOBILE, 1854-'55.

Comparative view of the Imports and Stocks of the following Staple Articles.

Articles.	Imported into the port of Mobile.				Stocks in hands of dealers, Aug. 31.				
	1854-5	1853-4	1852-3	1851-2	1855	1854	1853	1852	1851
Bagging..... pcs	20,294	21,010	22,870	21,260	5,058	3,018	3,359	1,812	4,312
Rope..... coils	27,680	21,233	22,466	17,938	4,290	3,374	5,343	2,090	3,118
Bacon, sides, wh'drs, hhd's	14,145	15,520	15,841	13,233	825	454	331	563	649
Hams..... tierces	3,222	.....	.....	.....	134	.....	.....	.....	.....
Beef..... bbls	1,154	.....	.....	.....	167	.....	.....	.....	.....
Coffee..... bags	25,123	21,190	20,721	22,027	1,127	1,476	4,225	1,225	1,220
Cotton—Alabama..... bales	465,828	.....	.....	.....	28,238	.....	.....	.....	.....
Florida..... bales	.....	.....	.....	.....	.....	.....	.....	.....	.....
Texas..... bales	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flour..... bbls	43,045	61,113	75,172	86,755	1,263	1,843	1,543	998	1,929
Do Alabama..... sacks	760	.....	.....	.....	.....	.....	.....	.....	.....
Corn—Ala. shelled..... sacks	11,958	174,220	105,858	100,615	5,535	7,424	9,003	1,900	12,733
Ala. in ear..... bbls	10,200	.....	.....	.....	.....	.....	.....	.....	.....
Western..... sacks	78,208	.....	.....	.....	5,539	.....	.....	.....	.....
Oats..... sacks	22,226	22,226	27,173	22,052	1,824	4,577	2,546	218	5,050
Hay..... bales	14,616	24,207	25,024	23,085	2,120	3,422	3,102	2,220	3,225
Fodder..... bales	209	.....	.....	.....	52	.....	.....	.....	.....
Lard..... bbls	1,647	.....	.....	.....	175	.....	.....	.....	.....
Do Alabama..... kegs	5,822	15,704	24,204	23,738	552	858	916	608	923
Cheese..... boxes	5,578	.....	.....	.....	142	.....	.....	.....	.....
Butter..... kegs	3,409	.....	.....	.....	194	.....	.....	.....	.....
Candles..... boxes	4,840	12,315	.....	.....	1,265	1,530	952	.....	.....
Cement..... bbls	3,584	.....	.....	.....	1,060	.....	.....	.....	.....
Lime..... casks	7,746	7,508	23,127	32,102	3,155	1,550	3,145	2,175	1,650
Staves..... thousand	76,600	.....	.....	.....	.....	.....	.....	.....	.....
Molasses..... bbls	23,343	41,123	20,647	16,621	845	2,156	1,902	723	769
Potatoes..... bbls	2,083	21,225	25,558	24,072	898	89	127	224	225
Pork..... bbls	10,425	13,221	12,416	13,274	123	520	417	515	2,027
Rice..... tierces	1,520	2,472	1,443	1,762	72	224	85	82	126
Sugar..... hhd's	7,017	8,621	8,313	7,122	310	605	1,015	123	576
Salt..... sacks	142,572	102,972	140,222	125,002	10,450	22,172	2,427	3,412	12,212
Whiskey..... bbls	17,222	21,722	20,222	19,012	1,212	2,022	3,452	3,222	2,022
Wheat..... sacks	3,221	.....	.....	.....	212	.....	.....	.....	.....

Exports of cotton to foreign ports from Mobile for two years ending August 31.

Exports to foreign ports, &c.	1855.			1854.		
	Bales.	Pounds.	Value.	Bales.	Pounds.	Value.
To Great Britain—In Am. vessels.....	136217	67942252	\$5955528	30720	40242020	\$2461542
Do..... British vessels.....	78231	32040023	3242025	142660	75027423	6226124
Do..... Bremen vessels.....	.....	.....	.....	725	404272	3225
Total to Great Britain.....	215248	106982224	9195772	221185	116424141	9220271
To France—In American vessels.....	102220	54274202	4620042	7272	32224042	3422122
Do..... French vessels.....	1400	702202	52222	.....	.....	.....
Total to France.....	111020	55224414	4712402	7272	32224042	3422122
To Spain—In American vessels.....	.....	.....	.....	.....	.....	.....
Do..... Spanish vessels.....	3777	1722570	127245	7222	3222422	321222
Total to Spain.....	3777	1722570	127245	7222	3222422	321222
To Russia.....	.....	.....	.....	.....	.....	.....
To Holland.....	2200	1422522	112222	2220	1422202	121222
To Belgium.....	2222	1222022	102222	2022	210222	222202
To Hamburg and Bremen.....	2212	1221222	141122	2222	1222202	122222
To Sardinia and Austria.....	1222	222114	22022	4222	2222214	220211
To Sweden.....	.....	.....	.....	.....	.....	.....
To Mexico.....	.....	.....	.....	.....	.....	.....
Total to other foreign ports.....	10122	5022242	442272	12224	1222777	272222
Grand total.....	340211	122204214	14552202	222222	122221202	14522414

460 COMMERCE SOUTHERN CITIES, 1854-'55—CHARLESTON.

Comparative Exports of Cotton and Rice from the port of Charleston.

Exported to	S. Isl'd.*	Upland.*	Rice.*	S. Isl'd.†	Upland.†	Rice.†
Liverpool	14,412	186,548	1,544	13,881	144,997	3,865
Scotland	118	2,817	4	106	3,232	.....
Other British ports .....	.....	207	1,143	199	555	3,339
Total Great Britain	14,530	189,572	2,691	14,186	148,784	7,204
Havre	4,150	61,831	1,628	3,966	33,580	5,630
Marseilles .....	.....	72	.....	.....	734	.....
Other French ports .....	.....	4,603	619	.....	2,965	1,552
Total France	4,150	66,506	2,247	3,966	37,279	7,182
Holland .....	.....	2,611	756	.....	2,202	139
Belgium .....	.....	4,878	314	2	3,029	2,154
North of Europe .....	.....	6,211	2,295	.....	7,408	7,447
Total North of Europe .....	.....	13,700	3,365	2	12,639	9,740
South of Europe .....	.....	27,020	.....	.....	18,901	.....
West Indies, &c .....	.....	.....	17,657	.....	.....	22,152
Total foreign ports	18,680	296,798	25,960	18,154	217,603	46,278
Boston	120	12,065	4,383	391	16,321	6,766
Rhode Island, &c .....	.....	711	.....	.....	493	.....
New York	5,651	157,106	32,545	6,140	148,438	41,050
Philadelphia .....	.....	19,118	5,767	81	12,934	4,735
Baltimore and Norfolk .....	.....	9,393	7,512	.....	12,387	10,197
New Orleans, &c .....	.....	.....	17,142	.....	.....	16,176
Other U. States ports .....	.....	60	236	.....	102	547
Total coastwise	5,771	198,453	67,585	6,612	190,675	79,461
Grand total	24,451	495,251	93,545	24,766	408,278	125,749

* From Sept. 1, 1854, to Aug. 31, 1855.

† From Sept. 1, 1853, to Aug. 31, 1854.

Comparative exports of rough rice and lumber from the port of Charleston.

Exported to—	R. rice.*	Lumber.*	R. rice.†	Lumber.†
	Bushels.	Feet.	Bushels.	Feet.
Liverpool	17,740	663,542	47,243	453,393
London	24,000	.....	49,296	.....
Other British ports .....	.....	.....	.....	506,011
Total to Great Britain	41,740	663,542	96,539	959,011
Havre .....	.....	28,767	.....	64,281
Bordeaux .....	.....	829,239	13,122	97,233
Other French ports .....	.....	285,296	.....	169,196
Total to France .....	.....	1,143,302	13,122	330,710
North of Europe	24,326	467,385	154,284	648,472
South of Europe .....	.....	3,038,771	.....	1,265,408
West Indies, &c .....	.....	2,025,653	100	3,526,651
Total to foreign ports	66,066	7,338,653	264,045	6,720,645
Boston .....	.....	1,623,466	.....	4,190,779
Rhode Island, &c .....	.....	6,405,655	.....	4,846,103
New York	6,502	1,135,198	43,385	1,428,361
Philadelphia .....	.....	3,538,205	.....	2,993,416
Baltimore and Norfolk .....	.....	2,577,531	.....	2,799,369
Other United States ports	500	1,236,709	15,634	858,977
Total coastwise	1,002	16,531,764	59,019	17,114,005
Grand total	73,068	23,852,417	323,064	23,844,650

* From Sept. 1, 1854, to Aug. 31, 1855.

† From Sept. 1, 1853, to Aug. 31, 1854.

Exports of Cotton from Savannah.

Ports exported to.	S. Isl'd*	Upland.*	S. Isl'd†	Upland.†
Liverpool	6,851	165,142	3,269	85,452
Other British ports			284	3,358
Total Great Britain.....	6,851	165,142	3,553	88,810
Havre	142	7,964	308	6,179
Other French ports				
Total France	142	7,964	308	6,179
Other foreign ports		3,088		3,591
Total foreign ports	6,993	178,194	3,861	98,580
Boston.....	208	47,241	135	41,156
Providence.....		3,532		4,191
New York	6,220	113,642	7,446	111,901
Philadelphia.....		19,666	2,696	24,299
Baltimore and Norfolk		4,761		5,548
Charleston	1,036	6,432	1,390	15,881
Other United States ports.....		450		387
Total coastwise.....	7,474	195,714	11,667	203,363
Grand total	14,467	373,908	15,528	301,943

* From Sept. 1, 1854, to Sept. 1, 1855.

† From Sept. 1, 1853, to Sept. 1, 1854.

Exports of Rice and Lumber from Savannah.

Ports exported to.	Rice.*		Lumber.*		Rice.†		Lumber.†	
	Cusks.	Fbts.	Cusks.	Fbts.	Cusks.	Fbts.	Cusks.	Fbts.
Great Britain	4	10,743,600			2	16,257,100		
St. Johns and Halifax.....		1,951,386			10	7,556,400		
West Indies	5,145	2,913,022			6,737	2,023,900		
Other foreign ports.....		3,396,300			905	1,516,200		
Total foreign ports	5,149	19,004,308			7,654	27,353,600		
Maine.....		1,931,700				8,502,800		
Massachusetts.....	1,445	639,400			2,487	5,828,700		
Rhode Island, &c.		41,000				130,000		
New York.....	3,578	1,527,959			12,219	4,452,200		
Philadelphia	803	587,800			5,972	616,500		
Baltimore and Norfolk.....	117	641,413			192	1,269,900		
Charleston.....	31				331			
New Orleans, &c.....	100				1,863			
Other ports		1,017,262			30	1,712,100		
Total coastwise	3,074	6,486,554			23,094	22,502,100		
Grand total.....	8,223	25,490,862			30,748	49,855,700		

* From Sept. 1, 1854, to Sept. 1, 1855.

† From Sept. 1, 1853, to Sept. 1, 1854.

Comparative Receipts, Exports, and Stocks of Cotton at the port of Savannah, from September 1 to date.

Years.	Receipts.	Exports.	Stocks.
1845.....	189,076	186,306	5,922
1846.....	236,029	234,151	7,787
1847.....	245,496	243,233	10,050
1848.....	406,906	405,461	11,500
1849.....	340,025	341,700	9,599
1850.....	312,294	317,434	4,500
1851.....	351,518	353,068	2,950
1852.....	345,363	343,163	5,150
1853.....	315,521	317,471	3,200
1854.....	388,366	386,365	1,981

JOURNAL OF EDUCATION.

SOUTHERN EDUCATION FOR SOUTHERN YOUTH.

The Hon. John Perkins, jr., of Louisiana, one of the ablest and most laborious members of the last Congress, who, we sincerely regret to learn, has declined a re-nomination in his district, in reply to an invitation to address the societies of Centenary College, refers as follows to the great mistakes which are made in regard to the education of southern youth, and interposes suggestions which will awaken a response in the breast of every reader of the Review.

I feel deeply the importance of educating our young men at the south, and had circumstances permitted, I should have been pleased to embrace the occasion of an address at your commencement, to express myself freely on the subject. I have long made it a point to watch the issues of the northern press, and the past year I purchased a full course of northern school and college books, such as are in most general use, and it seems to me impossible for a youth to be pressed through them and retain just feelings towards the south, or proper ideas of its rights under the Constitution. From the frightful pictures of slaves at work under the lash, which ornament the child book, up to the sickly sentimentalism of their class readers, and on through the "higher law" reasoning of "Hicock's Moral Science," there is a constant effort to impress the youthful mind with the idea that slavery is a *great sin*, for the existence of which every American citizen is responsible until Congress acts upon the subject. The compends and condensed commentaries upon the Constitution, prepared for schools and business men, and the only ones generally read by their divines and the great mass of the people, are just such as are fitted to confirm these early im-

pressions. I have in my library some eight of them, prepared under different names, and they all gloss over and misrepresent—in a manner calculated to deceive—the rights of the slaveholder under the Constitution; while they enlarge and artfully magnify, by every possible construction, the degree of power given to the federal government over the subject. To my mind, the certain result of all this in the future is plain. The free States have now the ascendancy in the government. In less than five years, issues of the gravest character will have to be decided in Congress. There will be something more at stake than the money value of southern slaves. To the south it will be a question of existence.

When that time comes I prefer to have the young men of the south prepared to speak from conviction of the wisdom and policy of our peculiar institutions. I do not desire their judgment won over by a perverted moral sentiment or by fictitious appeals to their passions. To confess that slavery is a great social and political evil, is to prepare for battle by throwing away our arms. It is worse—it is to plead guilty and ask for mercy.

There is a philosophy at the bottom of this subject which is well treated of in some of the French works on the organization of labor, and which should be particularly pressed upon our attention at this time, by the growing conflict between capital and labor at the north, dividing whole communities into classes, engendering hatred between trades, and sowing animosity and jealousy and ill-will between the rich and the poor to a degree, that one living at the south, and rarely thrown into the maelstroms of the northern cities, cannot conceive. There is a work recently published by Mr. Fitzhugh, of Virginia, called "Sociology for the South," which should be in the possession of every southern gentleman. It is full of valuable suggestions on this subject, and without necessarily endorsing every sentiment of the writer, few can read it and fail of being confirmed in their attachment to our peculiar institutions. A southern critic, speaking of this work, has said, with much truth: "The splendor, animation, and crowded population of the northern cities excite, bewilder, and delight southern men and their families. Compared with the calm, easy indolence of their own communities, a painful sense of inferiority depresses them when they go back to their own homes. The difference is as between a magnificent panoramic view, and a dark still landscape; life in action, and life in repose." "Let them be contented," the writer continues, "the work of Fitzhugh

will do much to reconcile them to what they have, and what they are, when he reveals to them the interior view, the miseries of pauperism, with its grim and hideous attendants, its dire degradations as shown in penitentiaries and houses of refuge even for the young."

To these indications of an unhealthy state of society in the north, the writer might have added, the mingling of religion and politics, the open profligacy charged by persons of reputed high character one against the other, and seemingly credited; the almost utter absence of anything like devotion to principle in political matters; the power of vice, of almost every description, to command respect by surrounding itself by wealth; and, beyond all, and, perhaps, in a great degree accounting for all, the gradual relaxation in the popular mind of any very strong religious faith. The Calvinistic churches of the Puritans have gradually gone off, first into Unitarianism, then into Universalism, and then into a higher transcendentalism, equivalent with Pantheism in religion, and higher-law-ism in politics.

In the law school at Cambridge, the jury for a moot-court is taken from the under graduates of the college, formerly it was selected from the members of the divinity school. A foreign writer, noticing this fact, and speaking of the gradual weakening of religious conviction in the New England mind, pointedly remarks, the reason for this change in the composition of the jury is supposed to be, that there are not ordinarily twelve men in the divinity school who believe in the existence of a God, and recourse has to be had to the ingenuous undergraduates!

It is common to hear it said by the unreflecting, that boys cannot be properly educated at the south, and must be sent abroad, to the north or Europe. There can be no greater error. The history of the country is illustrated by those who have been educated at the south. Washington grew up in a southern State. Jefferson, Madison, Monroe, Tyler, and Polk were educated at the south. Jackson, Taylor, Clay and Scott, received their instruction and formed their characters at the south. We hear also much of sending southern boys north, in order to have their prejudices removed; but we never see northern boys coming south for a similar purpose. It was the advice of Mr. Calhoun, himself a graduate of Yale, and therefore speaking from experience, that boys intending to reside at the south, should be educated at the south.

The character of an institution depends more upon the spirit and bearing of its pupils than upon the learning of its professors. Rich endowments, large libraries, and splendid

cabinets, no more than eloquent instructions, can make thorough and accomplished scholars, in the absence of a noble emulation to excel on the part of students. It does seem to me, that if there was to be a time when a young Louisianian would be roused to exert himself to reflect credit upon a college in his own State, it would be now when a false and perverted public sentiment is making almost impossible to him the prosecuting of his studies in those institutions of the north, which, like Harvard and Yale, from having been the lights of the country and looked to for half a century as the conservators of all that was good and true, have become the centres of an influence upon the mind and literature of the country deeply to be regretted. Instead of resisting they have stimulated the wild public sentiment around them—their professors rushing into anti-Nebraska political and religious meetings, and talking of exchanging their professorial robes for those of the soldiers to do battle in the cause of freedom! Strange language indeed in the connexion uttered—coming from Yale, one of whose best and purest presidents (Dr. Stiles) was at one period of his life a slaveholder, and so far an encourager of the slave trade as to have sent to Africa for a negro.

Harvard University, in its selection of such noted higher law abolitionism as the Hon. Amasa Walker and the Hon. Anson Burlingame as examiners of the classes of political economy, and in its recent deposition of Judge Loring from lecturer in its law schools, because of his honest and manly discharge of duty under the fugitive slave bill, has made a step even beyond Yale College in the effort to keep pace with what is called the moral sentiment (frenzy) of the day. It is with no pleasure I speak in this way of these institutions, for I graduated at Yale, and studied law at Cambridge, and for their presidents I entertain a respect approaching to reverence. Presidents Woolsey, of Yale, and Walker, of Harvard, are good and learned men, and of far too much wisdom, I am persuaded, to sympathise in the displays of some of their adjuncts.

I do not desire to prejudice you against the institutions of the northern States of the Union, nor by an allusion to objectionable influences unfortunately prevailing in them to diminish respect for what of scholarship and philosophy is truly admirable in them, but to awaken a feeling of pride in the fact of your membership of an institution within our borders, which it is a duty to cherish as the light and ornament of the State. While I would not go to the extent of Gouverneur Morris, of revolutionary memory, and provide by

will against the education, under any circumstances, of a son in a New England State, I feel that I may very properly congratulate you upon being connected with an institution like Centenary College, located in a pleasant and healthy portion of the State, blessed with good and able professors, and annually contributing to the educated mind of the country in an alumni, many of whom are honorably distinguished in all the walks and professions of life.

STEAMBOAT STATISTICS.

The Cincinnati Gazette publishes an interesting statement prepared by W. W. Guthrie, esq., local inspector, showing the number of steamboats in existence on the western and southern rivers, and the number of disasters for the six months ending June 30, 1855. From this it appears that 39 boats were totally lost. The estimated damage to boats was \$573,700, and to cargoes \$1,229,800. Thirty-one lives were lost. Twelve steamboats were destroyed by fire, 7 were damaged by ice, 52 were sunk or damaged by snags, 5 were damaged by explosion, and 7 by collision. The whole number of boats on western and southwestern rivers are put down at 600. Mr. Guthrie says:

“It is worthy of remark that there has been no explosion or collapse of flue of any boilers manufactured since the passage of the law by Congress of August 30th, 1852, and coming under the reduction of steam pressure. In every instance, the disasters have been from boilers made previous to the passage of that law.”

AMERICAN IRON.

Everything at present indicates a prosperous condition of the American iron trade. Our pig iron is now in far better repute and demand than it has been for a long time, and, by the attention of the manufacturers, it has been so improved as to possess all the valuable qualities of the Scotch pig. The Philadelphia American states that the Mount Hope and Hibernian iron mines, in New Jersey, are doing a large business. The rolling mill at Rockaway, N. J., has been enlarged, and is now driven by steam, instead of water power, the steam being generated entirely from the waste-heat of the building and heating furnaces, so that no more fuel is used than under the water power system. The mill is now constantly employed.

AGRICULTURAL AND HORTICULTURAL JOURNAL.

GRAIN CROP OF 1855.*

I. Growth of wheat in each State, 1847,-'50,-'55. II. States in which there is a deficiency of production when compared with consumption. III. Export from the United States 1847,-'54. IV. Average production per acre and period of harvesting. V. States producing surplus beyond consumption. VI. European wheat crop.

The importance of the grain crops is such to every class of the community, that we have taken pains to form reliable estimates from the most available sources, as to the production of the present year throughout the United States. The general result, so far as the wheat crop is concerned, will be highly satisfactory to the whole country; and will show that while we have the greatest abundance for our own population for the next twelve months, we have a liberal surplus for export to Europe and South America.

Some of the States show a product of from one hundred to five hundred per cent. beyond that of 1847, the Irish famine year. This increase is almost incredible, but we think the returns for the current year will fully bear us out in our estimates, namely:

Estimated production of wheat in some of the old as well as the new States and Territories in 1855, compared within 1847 and 1850, showing the vast increase in the supply.

	1847.	1850.	1855.
	Bushels.	Bushels.	Bushels.
North Carolina.....	2,350,000	2,130,102	4,000,000
South Carolina.....	1,300,000	1,066,277	3,000,000
Georgia.....	1,950,000	1,088,534	4,000,000
Tennessee.....	8,750,000	1,619,386	8,000,000
Missouri.....	1,750,000	2,966,928	7,000,000
Illinois.....	4,900,000	9,414,575	16,000,000
Indiana.....	7,500,000	6,214,458	12,000,000
Iowa.....	1,000,000	1,530,581	8,000,000
Wisconsin.....	1,200,000	4,286,131	7,000,000
California.....	.....	17,328	3,000,000
Minnesota.....	.....	1,401	8,000,000
Kansas.....	.....	.....	1,000,000
Oregon.....	50,000	211,943	1,500,000
	30,750,000	30,457,044	77,500,000

1847 to 1850, no increase.

1850 to 1855, increase 120 per cent.

In the following tables, to which we direct the careful attention of the reader, it will be found that we differ materially from the calculations or estimates of some of our contemporaries. The latter were prepared without full research into the probable production of each State. The estimates were upon crude materials.

Nothing can demonstrate more strongly the present productive power and the prospective wealth of the *Great West*, than the official tables of the grain crop of that region. From reliable data we show that Illinois alone will produce this year 6,000,000 of bushels of wheat, or nearly one-tenth of the whole crop of the country. Ohio, 20,000,000; Indiana, 12,000,000; these three States producing more than one-fourth of the whole.

* From *The Banker's Magazine*, New York, September, 1855.

Although the States west of the Mississippi do not at present make much show in the cereal crops, they will soon exhibit a stronger position. Missouri, Iowa, and Minnesota will, in a few years, produce as largely as Indiana, Illinois, and Michigan.

Our first table is a comparative exhibit of the product of the years 1847, 1850, and 1855, namely :

I. Estimate of the growth of wheat in the different Territories in 1855, as compared with the production of 1847, as per Patent Office Report ; and 1850, by Census returns, viz :

	1847. Bushels.	1850. Bushels.	1855. Bushels.
Maine	890,000	296,259	400,000
New Hampshire.....	610,000	185,658	250,000
Vermont	664,000	525,925	700,000
Massachusetts	256,000	31,221	100,000
Rhode Island	4,500	42	.....
Connecticut	125,000	41,762	30,000
New York	14,500,000	13,121,498	15,000,000
New Jersey.....	1,100,000	1,601,190	2,500,000
Pennsylvania.....	14,150,000	15,367,691	12,000,000
Delaware.....	410,000	482,511	500,000
Maryland.....	4,960,000	4,494,680	6,000,000
District of Columbia.....	.....	17,370	20,000
Virginia	12,000,000	11,232,616	15,000,000
North Carolina.....	2,350,000	2,130,102	4,000,000
South Carolina.....	1,300,000	1,066,277	3,000,000
Georgia	1,950,000	1,088,534	4,000,000
Florida .....	.....	1,027	150,000
Alabama.....	1,200,000	294,044	2,000,000
Mississippi.....	500,000	137,990	1,000,000
Louisiana.....	.....	417	.....
Texas.....	1,110,000	41,689	1,000,000
Arkansas.....	200,000	199,639	1,000,000
Tennessee	8,750,000	1,619,386	8,000,000
Kentucky.....	6,000,000	2,140,822	5,000,000
Ohio.....	16,800,000	14,487,351	20,000,000
Michigan.....	8,000,000	4,925,889	7,000,000
Indiana.....	7,500,000	6,214,458	12,000,000
Illinois.....	4,900,000	9,414,575	16,000,000
Missouri.....	1,750,000	2,966,928	7,000,000
Iowa.....	1,000,000	1,530,581	8,000,000
Wisconsin.....	1,200,000	4,286,131	7,000,000
Minnesota.....	.....	1,401	3,000,000
Kansas.....	.....	.....	1,000,000
New Mexico.....	.....	196,516	500,000
Utah.....	.....	107,702	1,500,000
Oregon.....	50,000	211,043	1,500,000
California.....	.....	17,328	3,000,000
	<hr/>	<hr/>	<hr/>
	114,245,500	100,479,150	175,200,000

These estimates indicate a product of seventy-five per cent. beyond that of 1850, and one hundred and seventy-five millions in the aggregate. If we allow 3½ bushels of wheat per head annually, or one hundred millions of bushels for home consumption, we shall then have on hand, for export or future stock, about seventy-five million bushels.

The New England States and some of the southern States are indebted to the west for their wheat and flour ; and here the "harmony of interests" is beautifully demonstrated. The cotton of the south and southwest, and the cotton fabrics of New England, go far to compensate the west for this indebtedness. The deficiency in these few States we estimate at about twelve million bushels, namely :

II. States in which there is a deficiency in the quantity produced for consumption, allowing $3\frac{1}{2}$ bushels to each inhabitant in the manufacturing, and 3 bushels in other States :

	Quantity produced. Bushels.	Consumed. Bushels.	Deficiency. Bushels.
Maine	400,000	2,100,000	1,700,000
New Hampshire.....	250,000	1,225,000	975,000
Vermont	700,000	1,200,000	500,000
Massachusetts	100,000	3,850,000	3,750,000
Rhode Island .....	.....	800,000	800,000
Connecticut.....	80,000	1,500,000	1,420,000
Deficiency N. E. States, bushels.....	.....	.....	9,145,000
District of Columbia.....	2,000	250,000	230,000
Florida.....	150,000	325,000	175,000
Alabama	2,000,000	2,400,000	400,000
Mississippi	1,000,000	2,500,000	500,000
Louisiana.....	.....	2,000,000	2,000,000
Total deficiency in ten States..	.....	.....	12,450,000

III. As a vast source of income, and as a means of paying a heavy indebtedness to Europe, let us look at the aggregate value of our export of bread tariffs. And in this exhibit, we certainly have cause for congratulation, namely :

Exports of breadstuffs and provisions from the United States to foreign countries, for each fiscal year, from 1846 to 1854, namely :

1846.....	\$27,701,121	1851.....	\$21,948,651
1847.....	68,701,921	1852.....	25,857,027
1848.....	37,472,751	1853.....	32,985,322
1849.....	38,155,507	1854.....	65,901,240
1850.....	26,051,373		

IV. We must look to the Mississippi valley, and to the really *far west*, (Texas and Oregon,) for prolific soils. In order to show the relative productiveness of the several States, we have examined the subject carefully, and we think the following conclusions are very near the truth :

Table showing the average number of bushels per acre and the time of harvesting in each of the principal wheat growing States :

States.	Average per acre.	Time of harvesting.
Maine.....	7 to 12 bushels.	Aug. 10 to Aug. 20.
New Hampshire.....	12 to 20 do	Aug. 1 to Aug. 10.
Massachusetts.....	10 to 20 do	July 25 to Aug. 10.
Vermont	15 to 25 do	Aug. 10 to Aug. 20.
New York.....	10 to 20 do	July 15 to Aug. 20.
New Jersey.....	15 to 25 do	July 1 to July 10.
Pennsylvania.....	12 to 25 do	June 20 to July 10.
Delaware.....	12 to 20 do	June
Maryland.....	10 to 20 do	June to July 1.
Virginia.....	10 to 20 do	June 15 to June 10.
North Carolina.....	8 to 15 do	June 10 to June 25.
South Carolina.....	8 to 12 do	June 1.
Georgia.....	8 to 12 do	June 1.
Alabama.....	8 to 15 do	June 1 to June 20.
Tennessee.....	8 to 12 do	June 10 to June 20.
Kentucky.....	12 to 15 do	July 1.
Ohio.....	10 to 20 do	July 1 to Aug. 1.
Indiana.....	12 to 30 do	June 20 to July 20.
Illinois.....	12 to 25 do	June 1 to July 25.
Michigan.....	15 to 25 do	July 10 to July 30.
Iowa.....	19 to 30 do	July 10 to July 25.
Wisconsin.....	15 to 25 do	July 15 to July 30.
Texas.....	20 to 30 do	May 15 to June 15.
Oregon.....	20 to 25 do	Aug. 1 to Sept. 1.

Many of our readers live "from hand to mouth," and few take the pains to collect, compare, and preserve the current statistics of the day—those that have an important bearing upon the vital interests of society. Hence we shall find that few persons can recollect the famine or short years, or the surplus years. To refresh the memories of our readers, we will recur to the leading features of the past few years, as to the grain crops.

The spring of 1846 was remarkably favorable for wheat and all cereals. The supply for 1846-'47 was extraordinary, and enabled us to export largely to Great Britain. Many cargoes were sent to relieve the suffering Irish.

In 1848 and 1849 the foreign export of breadstuffs declined, and in the latter year our agricultural interests were neglected; thousands rushed to California, forgetting that our wheat and corn, our iron and coal, were and still are of more value to us than the gold crop. Hence the product of cereals was barely sufficient for our own uses; and the year 1850 revealed the fact that the production of wheat had actually fallen off, as compared with 1847.

The winter wheat of 1854 was nearly half destroyed by the weevil in Ohio, Pennsylvania, Illinois, Indiana, and northwest Virginia, both before and after being harvested. The drought injured the late crops, and thus caused a heavy demand upon wheat as *food*. The aggregate product was within nine millions of bushels.

The year 1855 has exhibited remarkable weather—no previous season has been more propitious—and we think we have a grand result of *one hundred and seventy-five millions* of bushels for consumption, export, and for seed.

V. In a small number of States the product and consumption of wheat are nearly equal; but with the majority there is a large surplus. These latter we enumerate in the annexed summary, with a resulting excess of ninety-five millions of bushels, namely:

States and Territories where there is a surplus produced beyond the consumption required for each.

	Quantity produced. Bushels.	Consumed. Bushels.	Excess. Bushels.
New York	14,500,000	12,200,000	2,300,000
New Jersey	2,500,000	1,800,000	700,000
Pennsylvania	18,000,000	9,000,000	9,000,000
Delaware and Maryland.....	6,500,000	2,500,000	4,000,000
Virginia.....	15,000,000	4,500,000	10,500,000
N. Carolina, S. Carolina, and Georgia.	11,000,000	7,700,900	3,300,000
Texas and Arkansas.....	2,000,000	1,300,000	700,000
Tennessee	8,000,000	3,000,000	4,700,000
Kentucky	5,000,000	3,000,000	2,000,000
Ohio.....	20,000,000	9,000,001	11,000,000
Michigan and Wisconsin.....	14,000,000	2,800,000	11,200,000
Illinois	16,000,000	4,000,000	12,000,000
Indiana	12,000,000	3,800,000	8,200,000
Iowa and Minnesota.....	11,000,000	2,000,000	9,000,000
Missouri.....	7,000,000	2,500,000	4,500,000
Kansas, New Mexico, and Utah....	3,000,000	700,000	2,300,000
California and Oregon.....	3,000,000	1,800,000	1,200,000
Total.....			96,600,000
Deduct:			
Deficiency in ten States.....		12,450,000	
For seed and stock.....		20,000,000	32,450,000
Surplus for export, bushel.....			64,150,000

VI. We must not lose sight, however, of the fact that the harvest in Europe is very flattering. In Austria the harvesting of the grain crops commenced about the middle of July, and, with the exception of a few localities, the yield will be abundant.

Up to the last two weeks no signs of the potato disease have appeared in any of the German States.

The Prussian government has recently made inquiries in relation to the crops

in all the districts of the provinces; the result promises an abundant yield of wheat, while rye will scarcely be an average yield.

In Egypt the fields promise a highly abundant crop, and the only fear latterly expressed was an overflow of the Nile and the damage of their harvests.

We defer until another day any calculations as to the demand abroad for American breadstuffs, and as to the home value of flour for some months to come. The European demand will be in some measure contingent upon the duration of the war.

We see nothing now to dampen the hopes of the product of this year in the United States, and we have abundant grounds for congratulation, north, east, south, and west

CROPS AND EXPORTS—A BAD PROSPECT FOR CHEAP FLOUR.*

The estimates of the crops are generally large, and of wheat some of the figures run to a high range. It does not appear, however, that the effect of the export demand is taken generally into calculation. At such times as the present the public feel the necessity of some statistical data in relation to the actual products of the soil. The guesses indulged in as to the product of each and all the States are of no value. Unfortunately, however, the census of the United States give the only approximation, and it is only by comparing these returns with the actual export and current prices that the available crop can be estimated. These, for the two last enumerations, were as follows:

	Population.	Wheat crop. Bush.	Wheat exported. Bush.	Exp't val. Per bush.
1840	17,669,653	84,827,272	11,198,365	\$1 05
1850	23,267,723	104,799,230	8,656,982	1 02

The product per head in 1840 was 5 bushels, and in 1850, 4½ bushels. In the year 1847, the United States wheat crop was estimated as a large one, and that year was known as the "famine year" abroad. The Commissioner of Patents made, in that year, from the best authorities at his command, the following estimate in relation to the wheat crop:

Crop of 1847.....	bush.	114,245,500
Seed.....		11,424,550

Surplus.....		102,820,950
Consumption—3 bush. per head.....		62,239,200

Disposable for export.....		40,581,750
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Now the fact was that the export reached but 26,312,431 bushels, and that quantity only, being far more than could be well spared, although rising prices diminished home consumption, doubled the price. The following shows the census crop of 1850, the number of bushels actually exported, and the export price in each year since:

	Crop.	Bushels exported.	Price.	Price in England.
1849.....		12,309,972	\$1,09	40s.
1850.....	104,799,230	8,658,982	1 02	40
1851.....	114,000,000	13,948,499	0 95	38
1852.....	114,000,000	18,680,686	0 79	41
1853.....	125,000,000	18,958,993	1 05	45
1854.....	85,000,000	27,000,000	1 80	80
1855.....	135,000,000	2,000,000	2 40	75

It is to be observed that the estimate of 114,245,500 bushels by the patent report of 1847, left 40,581,750 bushels for export, allowing no more than three bushels per head for consumption. The fact was that the export of 26,312,431 bushels caused freights to rise to \$2 per barrel for flour, and the price in New York from \$4 44 to \$9 50 per barrel, and the price did not return to its old level

* From the United States Economist.

until 1852. It follows that the crop was not so large as estimated, or that the consumption was much greater. The census gave the crop of 1850 at 104,799,240 bushels, and the population 23,257,720. The result would have been as follows :

Crop, 1850.....bush.	104,790,230
Seed	10,479,923
	<hr/>
	94,319,307
Export.....	13,948,499

For consumption.....bush. 80,390,803

This would give $3\frac{1}{2}$ bushels per head. The export of 1851, the year ending in June, was, of course, the product of 1850. Now, it appears above, that with a crop of 104,799,230 bushels, of which 13,948,499 was exported, the price fell, hence the supply was excessive; but the price in England was very low. The crop of 1853 was very large; of that crop 27,000,000 bushels were exported in 1854. The population in 1854 must have been 26,292,000. Allowing the same consumption per head as in 1850, the crop of 1853 must have been as follows :

Crop.....bush.	125,000,000
Seed.....	12,500,000

Available.....	112,500,000
Exported.....	27,000,000

	<hr/>
	75,500,000
Consumption, at $3\frac{1}{2}$ bush.....	92,123,000

Deficit..... 6,500,000

The result was a very high price, which has since continued. The crop of 1854 was very short. The quantity exported has been smaller than any year since 1837. The consumption has also been less than usual, by reason of the price, which has continued high to the present time. If now we take the crop of 1855, now being harvested, at 135,000,000 bushels, which is a large estimate, the result works thus :

Crop.....bush.	135,000,000
Seed.....	13,500,000

Available.....	121,500,000
Consumption, $3\frac{1}{2}$ bush.....	94,670,355

For export..... 26,921,645

The quantities imported into England are as follows :

	Wheat. qrs.	Flour. cwt.	Total. bush. wheat.	Price.
1850.....	3,738,995	3,819,440	37,702,280	40s.
1851.....	3,833,636	5,363,478	46,760,522	38
1852.....	3,060,208	3,865,174	36,077,666	41
1853.....	4,949,314	4,646,400	53,533,712	45
1854.....	.....	.....	26,449,628	80

England imported all she could get in 1854, and the whole supply down to the present moment has not reduced the figure below a famine price. It is to be observed that England, in 1853, took less than half the exports from the United States, and her crop of 1854 was large, added to which, 27,449,628 bushels did not reduce the rates. If now the United States should have 27,000,000 bushels to spare, there seems to be a customer for the whole of it.

Inasmuch as that all kinds of food are very abundant this year in the United States, the consumption of wheat, under an active export demand, may be less than usual. That will result, however, from a high price, and there appears to be no chance of a small price.

A table may be constructed as follows : The consumption of the country, per the census figures of product, population, and exports, for the years 1840 and

1850, and the rate of increase in population being known, the results are as follows :

	Population.	Consumption at 3½ bush.	Actual export.	Crop.	Price in N. York.
1840....	17,060,653	64,565,447	11,198,098	84,827,272	\$5 44
1850....	23,267,723	84,182,986	8,817,015	104,479,923	5 62½
1851....	24,023,913	84,483,895	13,948,499	110,032,394	6 68
1852....	24,780,103	86,730,815	18,600,686	117,511,501	4 37
1853....	25,536,293	89,377,025	18,958,993	121,136,048	4 94
1854....	26,293,482	92,023,690	27,000,000	132,023,690	9 25
1855....	27,048,673	94,670,355	2,000,000	110,170,000	9 50
1856....	29,804,863	97,317,020	30,000,000	140,317,000	....

The crop, of course, is that of the previous year, in which the export and consumption take place. Thus the crop now being harvested, if it should reach 140,317,000 bushels, must be consumed and exported during the fiscal year which ends June 30, 1856. The population is calculated at an annual increase of 3¼ per cent., the actual increase between 1840 and 1850 having been 3½ per cent. At 3½ bushels per head the required consumption is as given in the column, but in seasons when other articles are cheap, the consumption will probably be less. It is manifest, however, that the consumption increases largely, and a crop which, in 1851, allowed of a large export at fair prices, was entirely insufficient in 1855.

COLZA OIL.

It may not be generally known that colza oil, made from "*Brassica Oleracea*" of the botanist, is the oil used for the light-houses of the United States, and that the consumption per annum is about 120,000 gallons. It is imported from Europe at a cost of over one dollar a gallon.

I understand that Lieutenant T. Jenkins, U. S. N., and one of the light-house staff, (a gentleman perfectly conversant with light-house engineering and their proper and efficient management, having, by practical experience and careful observation, mastered and acted upon the inventions of Bordier Marcet, Fresnel, and the Stevensons,) has endeavored, but without effect, to get some enterprising American to cultivate the plant here.

In the hope that this "pilot" notice will meet with the consideration of some one who is ready to undertake a *safe* and *most remunerating* adventure, I beg respectfully to throw out the following hints regarding its character and cultivation.

Colza is a variety of cabbage, whose seeds afford, from pressure, an oil much employed in France and Belgium for burning in lamps, and for many other purposes. It requires a rich but light soil; it does not succeed upon either *sandy* or *clayey lands*. The ground for it must be deeply ploughed and well dunged. It should be sown in July, and be afterwards replanted in a richly manured field. In October it is to be planted out in beds, fifteen or eighteen inches apart. It may also be sowed in furrows eight or ten inches asunder.

Land which has been just cropped for wheat is that usually destined to colza; it may be fresh dunged with advantage. The harvest takes place in July, with the sickle, a little before the seeds are completely ripe, lest they should drop off. As the seed is productive of oil, however, only in proportion to its ripeness, the cut plants are allowed to complete their maturation by laying them in heaps under airy sheds, or placing them in a stack and thatching it with straw. The stalks are thrashed with flails, the seeds are winnowed, sifted, and spread out in the air to dry, then packed away in sacks, in order to be subjected to the oil mill at the beginning of winter. The oil cake is a very agreeable and nutritious food for cattle, and serves to fatten them *quickly*. This alone will *defray the cost of the mill*.

I think it proper to state that colza impoverishes the soil very much, as do, indeed, all the plants cultivated for the sake of their oleaginous seeds. It must not, therefore, be come back upon again for six years, *if fine crops are desired*. The double ploughing which it requires effectually cleans the ground.

A. WILLIAMSON.

WASHINGTON, August 10, 1855.

MODE OF EXTRACTING TALLOW FROM THE TALLOW TREE.

A few days ago a gentleman residing in Texas addressed the Commissioner of Patents in regard to the tallow tree, and desired to be furnished with the best mode of extracting the tallow. We copy the method recommended by this office:

"The seeds of the tallow tree (*stilingia sebifera*) are picked in China at the commencement of cold weather, in November and December, when all the leaves have fallen. The seeds are, in the first place, taken to the building where the process of making the tallow is carried on, and picked and separated from the stalks. They are then put into a wooden cylinder, open at the top, but with a perforated bottom. This is placed over an iron vessel (about the same diameter, or rather larger than the wooden cylinder, and about six or eight inches deep) containing water, by which means the seeds are well steamed, for the purpose of softening the tallow, and causing it more readily to separate. The furnace has four or five iron vessels in a row, about three feet high, four or five feet broad, and eight or ten feet long. The fire is placed at one end and fed with the husks of the rice, dry grass, and such like cheap materials, which make a great flame, and the flue is, of course, carried directly under the whole of the iron vessels.

"When the seeds have steamed ten minutes, or a quarter of an hour, they are thrown into a large stone mortar, and are gently beaten by two men with stone mallets for the purpose of detaching the tallow from the other parts of the seed. They are then thrown upon a sieve, heated over the fire, and sifted, by which process the tallow is separated, or nearly so, although they generally undergo the process of steaming, &c., a second time, that nothing may be lost. The other part of the seed is ground and pressed for oil.

"The tallow now resembles coarse linseed meal, but with more white spots in it, and derives its brown color from the thin covering over the seed, (between it and the tallow,) which is separated by the pounding and sifting. In this state it is put between circles of twisted straw, five or six of which are laid upon each other, and thus forming a hollow cylinder for its reception. When this straw cylinder has been filled, it is carried away and placed in the press, which is a very rude and simple contrivance, but which, like everything Chinese, answers the purpose remarkably well. The press consists of longitudinal beams of considerable thickness, placed about a foot and a half or two feet asunder, with a thick plank at the bottom, forming a kind of trough, and the whole is bound together with iron. The tallow is pressed out by means of wedges, driven in very tightly with stone mallets, and passes through a hole in the bottom of the press into a tub, which is sunk there to receive it. It is now freed from all impurities, and is a semi-fluid of a beautiful white color, but soon gets solid, and in cold weather is very brittle. The inside of the tubs which collect the tallow is sprinkled or dusted over with a fine red earth, well dried, which prevents the tallow from adhering to their sides. It is thus easily removed in a solid state from the tubs, and in this condition the cakes are exposed for sale in the market. As the candles made from this vegetable tallow have a tendency to get soft and melt in hot weather, they are commonly dipped in wax of various colors, as red, green, and yellow. Those which are intended for religious purposes are generally very large, and finely ornamented with golden characters.

"The cake, or refuse, which remains after the tallow has been pressed out of it, is used for fuel, or to manure the land, and so is the other part of the seed from which oil is extracted."

It may be remarked that this tree has been cultivated in South Carolina for more than a hundred years, and appears well adapted to the climate.

RICE.

We have been politely favored, says the Charleston Mercury, by the Hon. William Aiken, with the subjoined communication from the Hon. J. J. Seibles, our minister in Belgium:

LEGATION OF THE UNITED STATES, *Brussels*, July 21, 1855.

DEAR SIR: I send you enclosed an extract from the *Journal des Debats*, (Paris,) which I have thought might contain information of importance to you gentlemen

of the United States engaged in the culture of rice. If two crops from one planting can be gathered in Egypt, I don't see why the same result might not be obtained in the United States.

Our consul general at Alexandria—a gentleman formerly of your State, (Mr. Edwin DeLeon,) doubtless well known to you—could, and no doubt would, with pleasure, procure you any information that you would seek in reference to the matter.

With great respect, your very obedient servant,

J. J. SEIBELS.

Hon. WILLIAM AIKEN, *Charleston, S. C.*

The extract alluded to above, from the *Journal des Debats*, is as follows :

Our last advices from Alexandria report a fact which, at the same time in possibly exercising a great influence in the condition of Egypt, presents also a great deal of interest in a scientific and economical point of view. It is the discovery of a new system of culture by which two successive crops of rice are obtained by a single sowing, and in the same space of time as it takes ordinarily to produce one crop. The inventor of this system is a learned professor of agriculture, of Venice, Mr. Jerome Lattis, who went two years ago to Egypt to carry out on a large scale his valuable discovery. Notwithstanding the difficulties that he was necessarily doomed to encounter in a country governed by routine, he nevertheless, as early as last year, succeeded in obtaining from S. A. Mustapha Bey, son of the late viceroy, Ibrahim Pacha, permission to try his system on one of his lands in the environs of Alexandria. The experiment was eminently successful, and the working men among the natives and the Europeans have verified the existence of the double crop promised by the inventor.

In the meanwhile, Said Pacha ascended the throne, and one of his first acts was to call Mr. Lattis and grant him a firman brevet (patent) for seven years, and request him at the same time to apply his new system of culture to his lands of Destene and Beyrouth. This example set by his highness induced large landholders, native and European, to adopt the Lattis system, and, since two months, 2,000 feddams of ground have undergone its application. All the rice produced by the new system has already borne the ears with a precocity unknown in the country, and will, consequently, give the first crop towards the middle of July, while the sowing done under the old system generally matures at the end of October.

By the results already known the problem can be considered as solved, and the invention of the new mode of cultivation in creating a new source of public riches, will have also well deserved from humanity in contributing to the solution of the great question of substances.

REMEDIES FOR DISEASES OF CATTLE.

Redwater.—Bleed (says Youatt) first, and then give a dose of 1 lb. of Epsom salts, and $\frac{1}{2}$ -lb. doses repeated every eight hours until the bowels are acted upon. In Hampshire they give 4 oz. bole armenian and 2 oz. of spirits of turpentine in a pint of gruel.

Blackwater is the concluding and commonly fatal stage of redwater.

Cleansing drink.—1 oz. of bayberry powdered, 1 oz. of brimstone powdered, 1 oz. of cummin-seed powdered, 1 oz. of diapente. Boil these together for ten minutes; give when cold in a gruel.

Colic.—The best remedy is 1 pint of linseed oil mixed with $\frac{1}{2}$ oz. of laudanum.

A cordial is easily made by 1 oz. of caraway seeds, 1 oz. of aniseeds, $\frac{1}{2}$ oz. of ginger powdered, 2 oz. of fenugreek seeds. Boil these in a pint and a half of beer for ten minutes, and administer when cold.

Diarrhœa.—Give $\frac{1}{2}$ oz. of powdered catechu, and 10 grs. of powdered opium, in a little gruel.

Dysentery.—The same as for diarrhœa.

Fever.—Bleed; and then if the bowels are constipated, give $\frac{1}{2}$ lb. of Epsom salts in three pints of water daily, in gruel.

Hove or Hoven.—Use the elastic tube; as a prevention, let them be well supplied with common salt, and restrained from rapid feeding when first feeding upon rank grass or clover.

Mange.— $\frac{1}{2}$ lb. of black brimstone, $\frac{1}{2}$ pint of turpentine, 1 pint of train oil. Mix them together, and rub the mixture well in over the affected parts.

Milk fever, or Garget.—2 oz. of brimstone, 1 oz. of diapente, 1 oz. of cummin-seed powdered, 1 oz. of powdered nitre. Give this daily in a little gruel, and well rub the udder with a little goose grease.

Murrain.— $\frac{1}{2}$ lb. of salts, 2 oz. of bruised coriander seed, 1 oz. of gentian powder. Give these in a little water.

Poisons swallowed by oxen are commonly the yew, the water dropwort, and the common and the water hemlock. $1\frac{1}{2}$ pints of linseed oil is the best remedy.

Purge, in Poisoning.—Either 1 lb. of salts in a quart of water or gruel, or a pint to a pint and a half of linseed oil.

Sprains.—Embrocation: 8 oz. of sweet oil, 4 oz. spirits of hartshorn, $\frac{1}{2}$ oz. oil of thyme.

Sting of the Adder or Slowworm.—Apply immediately to the part strong spirits of hartshorn; for sting of bees, apply chalk or whitening mixed with vinegar.

Worms.—Botts; give $\frac{1}{2}$ lb. of Epsom salts, with 2 oz. of coriander seed bruised in a quart of water.

Yellows.—2 oz. diapente, 2 oz. of cummin seed powdered, 2 oz. of fenugreek powdered. Boil these for ten minutes in a quart of water, and give daily in a little gruel.

HORSE AND MULE POWER.

ON THE COMPARATIVE ECONOMY AND VALUE OF HORSE AND MULE POWER, BY
J. S. SKINNER.

Review of the premiums offered by the Agricultural Society of Prince George's county, Maryland.

For the best Jack, \$5; for the best Jenny, \$5; for the best pair of mules, \$5.

The prejudice against the mule seems to be as inveterate as that which impels the "heel" of every son of Adam to "bruise the serpent's head," whether it be the head of the innocent water or the harmless black snake, or the viper or copperhead, bloated with poison. Does this aversion to breeding mules owe its origin, too, to a divine command—"thou shalt not let thy cattle gender with a diverse kind?" But the same prohibitory command addressed to the Jews forbade also the "mixing of seed," yet who deems it therefore unchristian to mingle the seed of clover and timothy?

Instead of this invidious distinction by the committee in favor of the horse, offering the highest premiums for that very expensive animal in all his ages, forms, and sexes—young and old, quick and slow, male and female—it were better, we should think, to have held up the highest premium to him whose *mule power* should bear the greatest, and *horse power* the least proportion the one to the other, in use on his plantation! As for rewarding the mere exhibition of the "best pair of mules," what length of merit can be discerned in that, unless it be that it implies length of purse to give the highest price? If driven to the ground in the owner's own carriage, in lieu of a pair of \$500 Vermont horses, that would be quite a different matter. The mode of taking the last *census* was very defective in many respects. For example, it only gives the number of "horses and mules" in the aggregate; while here, at once, is an agricultural problem which requires for its investigation that we should have accurately and separately stated the number of *each*.

Twenty years ago it was estimated that the horses in England consumed the product of twenty millions of highly cultivated acres, and Sir John Sinclair calculated the keep of one horse to be equal to the product of five acres. Let us suppose constant work to be provided, as it should be, for every horse that is kept on a plantation, do not true economy as well as humanity and justice demand that each horse so worked should be well fed? and if so, may not each horse be estimated to consume, at $2\frac{1}{2}$ gallons a day, \$56 of corn? Add to this \$14 for other provender and shoeing and physicing; and you have an outlay of not less than \$75 a year for every work horse, to say nothing of idle brood mares, colts, carriage-horses, and other *non-producers*; a sum for each horse equal to the purchase of a first-rate mule, while the average life of the former will not more than half equal the latter.

Among planters in the south, whose position and circumstances are so identical with those of Maryland, the economy and advantages of the mule over the horse are universally admitted. The reports of an agricultural society of South Carolina, in relation to this subject, may here be quoted, where it asserts: "The mule is more easily raised than the horse, more able to bear heavy burdens, equally strong for the draft, more patient, equally docile, will live twice or thrice as long, capable of enduring much more labor, will do as much work in the same time, and will not be more than one-half the expense, as they will not eat more than one-half the grain, will make use of long forage which the delicacy of the horse will reject, and will bear the heat full as well, perhaps better."

Should these considerations induce planters to ponder and reflect how far it is expedient to aggravate, by their highest honors and rewards, that natural and costly predilection of our countrymen for horses, which may be said already to amount to a passion, one which had its origin in deeds and days long past of

"————— Christian service and true chivalry,"

but no more congenial with this utilitarian, money-saving age of ours than would be the vagaries of the Knight of La Mancha himself.

The last census (1840) gives for Prince George's county, Maryland, 4,648 horses and mules. This we believe to be much short of the real number. The aggregate of both for the State is returned at 92,220.

It is not extravagant to assume that 60,000 horses in Maryland might be well superseded by mules, and taking only \$10 as the clear saving for each, here would be a reduction of annual expenditure; in other words, an increase amounting to \$600,000, equal to the interest on the State's debt.

In all steady continued draft, as in threshing, grinding, and other machinery, now so much in vogue, the excellence of the mule is most remarkable, and especially in his less liability to gald, an evil to which the horse is peculiarly subject where his locomotion in harness is *circular*. On their value in service that consists of constant, steady hauling, an extract may here be made from some editorial remarks in an old volume of the American Farmer, then conducted by Mr. Skinner, now of Washington. Speaking of the decided preference given by the late General Ridgely, of Hampton, to the mules in the heavy hauling connected with his iron works, it is observed: "For some time the general indulged an old servant in keeping a single team of horses, but it was found that the mule teams performed their day's journey, hauling equal weight, sooner than the horses by an hour; and the greater value of the mules has been so well established, in the course of his ample experience, that they have superseded horses, with entire conviction of the great saving accomplished by the change. This information, first derived from his manager, Mr. Green, was fully confirmed by the general himself."

Why, then, let it be repeated, in reference to those two animals, make fish of one and flesh of the other, offering \$76 in premiums for the horse, and \$15 only for "jack, jenny, and mules," and that, too, under the authority and sanction of gentlemen who cannot be too much admired for their public spirit and honorable intentions, nor too closely imitated in their individual practice and general management?

As to the more general use of the mule in light harness for the road, the common impression is that he cannot be made to *travel fast enough*. Nobody likes rapid motion more than the writer of these crude but well meant strictures; and he would like to inquire, who has given to this neglected hybrid a patient and fair trial, to see how much his speed may be improved? Let it be considered how long it takes to bring a crack trotter such as Ripton and Confidence to his best. Hiram Woodruff or Bill Wheelan, the American Chifneys among trotting jockies, never think of taking a horse in hand to train him for this pace until after he reaches his sixth or seventh year, and can hardly be said to get to their best work until they fall into their teens. Old Topgallant performed his *chef d'œuvres* after he was twenty. When the mule has been in like manner taken up, and systematically trained for the trot, and it is found that he cannot be driven at the rate of eight miles an hour, it will be time enough to pronounce him impracticable in that pace; but the writer knows him to be master of that rate, for he has ridden with two others besides General James Shelby—who drives nothing else in his private carriage—from Lexington out to his magnificent blue grass farm, eight miles from Lexington, behind two mules, of about fifteen hands, within the hour,

and without a touch of the whip, and learned from the general that he had driven a pair to the Blue Lick, a distance of forty miles, in six hours, stopping one hour on the way.

In lieu, then, of some of the premiums bestowed on breeding stock, to give animals of slow draft, and on sucking colts, would it not be more politic to lend the countenance of the society to the rearing and more general adoption, for the road as well as for the field, of a more economical and enduring animal power? Might not a premium be well offered in the shape of a set of *knitting needles* in a silver case, or a butter cooler of ground glass, with a cow reposing on its silver lid, to the wife of the planter who shall accompany him to the cattle show in a light carriage drawn by the pair of *best broke mules*?—to the wife, because it is doubtful whether, without her ladyship's consent, this great desideratum in rural economy ever can, or perhaps we should add, *ever ought to be achieved*. Were it to be imagined that the fact would have any weight with our republican housewives, it might be added that the medals struck in honor of Agrippina, a heroine whose life was adorned with the most noble virtues, bear on them the image of a mule; and a gentleman at my elbow reminds me that he has seen Charles X. setting out for his royal palace at Fontainebleau, thirteen leagues from Paris, driving six splendid black Spanish mules of Andalusian blood! But it would be a libel, of which I should never be guilty, to suppose that an American matron could be influenced by any motive so strong as her ambition to promote the independence of her husband, and to set to her friends and neighbors an example of economy and good sense.

"Whoso findeth [such] a wife findeth a good thing."

STATE AGRICULTURAL FAIRS.

The following list shows the times and places of holding the agricultural fairs of the different States, so far as they have been appointed:

Connecticut, at Hartford.....	October 9, 12.
Alabama, at Montgomery.....	October 23, 26.
Canada East, at Sherbrooke.....	September 11, 14.
Canada West, at Coburg.....	October 9, 12.
East Tennessee.....	October 23, 25.
Georgia, at Atlanta.....	September 10, 13.
Illinois, at Chicago.....	Second week in October.
Indiana, at Indianapolis.....	October 17, 19.
Kentucky, at Paris.....	September 25, 28.
Maryland, at Baltimore.....	Last week in October.
Michigan, at Detroit.....	October 2, 5.
New Hampshire.....	September 12, 14.
New Jersey, at Camden.....	September 19, 21.
New York, at Elmira.....	October 2, 5.
North Carolina.....	October 16, 19.
Ohio, at Columbus.....	September 18, 21.
Tennessee, at Nashville.....	First week in October.
Vermont, at Rutland.....	September 11, 13.
Pennsylvania, at Harrisburg.....	September 25, 28.
Virginia, at Richmond.....	October 30, November 2.
Western Virginia, at Wheeling Island.....	September 26, 28.
Philadelphia Society for Promotion of Agriculture, at Powelton.....	September 12, 13.

INSECTS INFESTING THE COTTON PLANT.

BY TOWNEND GLOVER, OF THE PATENT OFFICE.

(Illustrated with a lithographic representation.)

In visiting the plantations near Columbia, in South Carolina, in September last, for the purpose of examining the habits of the insects injurious to cotton, the first that attracted attention was the great number of cantharides, a species of blister fly, in the flowers of the plant, feeding upon the nectar or pollen, and,

in many instances, upon the petals themselves. These insects were similar in appearance to the striped potato fly, (*Cantharis vittata*, of Harris,) so destructive to the potato plant in the more northern States. These, however, were much smaller in size than the *Cantharis vittata*, and rather different in markings and color. Several small cantharides of an ash or rusty greyish color, more or less marked with stripes, were also found devouring the petals at the same time.

A species of chauliognathus (*Chauliognathus pennsylvanicus*, of De Geer) was found in similar situations in great numbers, but did not appear to attack the petals like the above mentioned cantharides, and, as far as observed, contented itself with the nectar in the interior of the flowers.

A leaf beetle (*Galereuca duodecimpunctata*) devours holes in the petals also; but I imagine that none of these insects do much injury to the crops, unless it should be discovered that they pierce the embryo bolls, as several planters assert, although I never observed them in the act. The large green thorny and poisonous caterpillar of the moth saturnia sometimes does considerable damage to the foliage of cotton plants during the latter part of August and the beginning of September. It also devours the leaf of the Indian corn. These caterpillars inflict very painful wounds with their spines if handled incautiously. As they do not appear to be very numerous, however, they probably injure the main crop only in a trifling degree. Shaking them off with a stick, and then trampling them under foot, appears to be the only method to destroy this caterpillar.

The much-dreaded cotton louse (*Aphis?*) was not found very abundantly at this late season, as the dry, hot weather of the past summer had been unfavorable to its increase; and it is mostly when the cotton plants are very young and tender, or during damp seasons, that the attack of these insects is mostly to be dreaded.

The boll-worm (*Heliothes?*) was not found to be very numerous. It generally does more damage to the crops further south or west. Several of these insects were found, however, on Mr. Moultrie Weston's plantation near Gadsden. Their presence was first indicated by the quantity of young bolls and buds which had fallen to the ground and were gradually withering under the plants. Each of these fallen bolls, upon examination, exhibited merely a small puncture on the outside. The inside, however, was either wholly or partially eaten out by the young worms and filled with feces; but they were not to be found in the inside of these fallen bolls, as their instinct teaches them to escape in time before the boll falls. Whenever the neighboring plant was thoroughly searched, the worm was almost invariably found perforating another boll in a similar manner, or resting upon a leaf preparatory to casting its skin, which operation is performed several times before it attains its largest size. When a boll is attacked, the calyx "flares" open in so marked a manner that any experienced planter can determine at one glance such bolls as have been injured; but if the boll be very young, it almost invariably falls to the ground and withers. More damage appears to be done to the crop here by the destruction of these young bolls than is generally supposed, as they are scarcely observed when lying dried up upon the parched soil.

The caterpillar of a butterfly (*Argynnis columbina*) was found upon the cotton plant, but had evidently wandered away from its favorite food, which consists of the wild passion vine, or May pop, (*Passiflora*.) These insects cannot do much, if any, injury to the cotton, as multitudes were afterwards found on the May pop, which is a very troublesome weed to eradicate, and grows profusely in and about the edges of plantations. In October and November the so-called grass worm was very abundant in the cotton and grass lands near Columbus; but it has been stated by the best planters in that neighborhood that it does trifling, if any, damage to cotton, for if the grass and weeds are suffered to grow between the rows, the caterpillars will devour the grass in preference to the cotton. When very hungry, however, they will eat the cotton plant, as I reared about thirty of these insects on cotton leaves alone, although they appeared to prefer grass, if attainable. The perfect moth came out about the 28th of October.

A small green caterpillar of a yellowish brown moth (*Tortrix?*) was found, but not very abundantly, on the leaves, which it rolled up, and thus formed a secure retreat from its enemies, and only issued forth to feed upon the surrounding foliage. The yellowish hairy caterpillar of a species of arctia was also found feeding upon the leaves. The habits of this insect appear to be solitary, and as very few were found, the crop cannot be materially injured by them, at least in this part of the country. Many green smooth-skinned caterpillars of a moth (*Plusia?*)

about an inch in length, were found from the 12th of October to the 2d of November, feeding upon the "blooms" of cotton, in company with others, similar in color and size, but distinguished by a longitudinal band of white on each side. The latter were likewise very destructive to the leaves of turnips, as stated by Mr. C. F. Peabody, of Columbus. Several very slender, brownish span-worms, about half an inch in length, were observed upon the "blooms" of cotton in September and October, but as these insects merely eat small holes in the petals, they cannot do much harm.

Another caterpillar, from about an inch to an inch and a half in length, and of a beautiful dark velvety appearance, with longitudinal yellow stripes, appeared to have the same habit of burrowing into the bolls in a similar manner as the so-called boll-worm, but was not sufficiently numerous to injure the crop.

A small beetle (*Cetonia melancholica*), of a greenish metallic cast, barred with dirty cream color, was found in the holes already pierced by the boll-worm, in September and October. These insects appeared merely to frequent such places for the extravasated sap which exudes from the wounds previously inflicted by the worm. They were never observed actually boring into the bolls, but were very numerous in such places. As many as five were taken from one boll where the sap was flowing very freely.

(Several insects (*Pentatoma* and *Anisoscelis*) were very abundant in the cotton-fields, both on the bolls and leaves, which have been accused of piercing the young bolls for the sake of the juice; but as none were observed in the act, it cannot be stated definitely whether they actually do harm or not before their habits have received further investigation.

The cotton louse (*Aphis*?) made its appearance again during the cold, damp weather in November, but too late to do much harm.

Among the insects observed to be beneficial to the planter was the lady-bird, (*Coccinella*?) plate 8, which, both in the larva and perfect state, devours myriads of cotton lice. The grub, or maggot-like larva, of the syrphus sucks out the juices of the plant lice, and thus destroys them.

The predatory larva of the lace-wing fly (*Hemerobius*?) also devours multitudes of these pests; and minute ichneumon flies deposit eggs in the bodies of the living aphid, or cotton louse, which, when hatched into grubs, eat out the interior substance of their bodies, and thus destroy them. Other ichneumon flies are ever busy on the wing in search of noxious caterpillars, in the bodies of which they deposit their eggs in a similar manner.

The tiger beetles (*Cicindela*?) and other beetles (*Carabus*?) are constantly roving about to seize and devour such other insects as may be so unfortunate as to happen to fall in their path; and thus has Nature kindly provided one class of insects to live entirely upon others, to keep the noxious ones in check and prevent their too rapid multiplication.

The ants which swarm upon cotton plants merely frequent them for the sake of the sweet sticky substance that is elaborated in the body of the aphid, or cotton louse, and afterwards is ejected upon the leaves, and forms their favorite food. Ants also prove beneficial in many other cases, as they destroy all weak or disabled insects they can overcome.

Spiders, too, are useful in destroying injurious insects on the cotton. Some spin their web from plant to plant, and thus entrap multitudes of unwary flies and moths. Others, again, rove from leaf to leaf, hunting for insect food, upon which they spring with the unerring leap of a beast of prey. In short, almost all insects may be classed as either beneficial or prejudicial to agriculture, and all intelligent farmers and planters should be able to distinguish their friends from their foes. The former should be protected and encouraged by all the means in their power, whilst it is only by studying the habits and natural history of the others that they may at length learn some effectual methods of destroying them either in the larva, pupa, or perfect states. For, if we consider that one female "miller," or moth, produced early in the spring and allowed to deposit her eggs, is the mother of the myriads of ravenous caterpillars which in the late summer and fall devastate our fields and woods, the necessity of a closer study of her habits will at once be apparent to the most careless observer. The instincts of insects are various, some being attracted by fire or lights, others by sweets; many avoid certain substances; others, again, remain concealed all winter in the stalks of plants, and it is only until a thorough investigation has been made of their habits that any step can be taken effectually to destroy and exterminate them.—[To be continued.]

CIRCULAR OF THE STATE AGRICULTURAL SOCIETY.

To the District Societies of the State of South Carolina.

The undersigned, who were appointed an executive committee at the recent meeting of delegates from various portions of our State to form a State Agricultural Society, would respectfully suggest to you the importance of such an object, and earnestly request of you to call on the citizens of your respective districts to unite and form District Agricultural Societies that shall co-operate with the State Society in collecting useful information and disseminating it among the people at large. We also propose to offer annually suitable premiums for the best managed farms, for the most approved breeds of stock, and for the implements of husbandry best adapted to our agriculture; also for the mechanical, artistic, and domestic productions of our citizens; and we hope, by the stimulus thus afforded and the rivalry thus excited, to bring about a gradual and steady improvement, not only in agricultural but in all of the industrial pursuits of our State; and we trust that every citizen of South Carolina, from the humblest to the highest, will zealously enlist in so important and patriotic an undertaking.

To accomplish so laudable an object, it is evident we must have the means, and those, too, of a permanent character. We propose, therefore, to raise, by individual subscription, the sum of twenty-five thousand dollars, (\$25,000,) and to petition our legislature for a suitable amount of money, to be invested in stocks paying regular dividends, and to use annually only the income from such investment. To raise the individual subscription, it is proposed that citizens in the different districts, who are disposed to join the State Agricultural Society, shall become life members upon the payment of twenty-five dollars (\$25) each, and that the different district societies shall pay annually the sum of two dollars into the treasury of the State Society. From these three sources we hope to raise abundant means. At the late agricultural meeting in Columbia, there were ninety delegates who became life members, and raised, in a few minutes, over two thousand dollars, (\$2,000;) and we have every reason to believe that the citizens of the district of Richland and the town of Columbia will raise a like amount, and that the town council will also make liberal donations to the society by providing the grounds and suitable accommodations for the exhibition of stock, implements of agriculture, and the product of the mechanic arts. With such bright prospects before us, we entreat every one to use his exertions to form district societies, to become himself a life member of the State Agricultural Society, and to procure as many other life members as can possibly be obtained. Above all, we invite each district society to send delegates to the agricultural meeting that is to take place in Columbia on the second Tuesday of November next; and we most earnestly request each member of the State society to be punctual in his attendance, for it is not only by an interchange of feelings and opinions on the subject of agriculture, that we can hope to give to it that importance to which it is so justly entitled, and to excite that laudable spirit of rivalry among our district societies, by which they will become honorable competitors in advancing the prosperity of their respective districts, and the means of developing and increasing the agricultural resources of the whole State; we also propose, as soon as a permanent fund shall be provided, to appoint a secretary and treasurer to the State society, who shall take charge of all reports and other communications from the district societies, and publish all that shall be worthy of publication in a weekly or monthly agricultural journal, to be under the control and direction of the executive committee; which journal shall be sent gratuitously to each life member of the State Agricultural Society. Thus, you will perceive, that the district and State societies will be made to co-operate most harmoniously—the one in collecting information, and the other in publishing and diffusing it. We, therefore, most earnestly appeal to you to aid us in carrying out our laudable purposes.

A. P. Calhoun, E. G. Palmer, J. U. Adams, R. W. Gibbes, O. M. Dantzer, R. J. Gage, A. Sumner, executive committee.

CONSTITUTION OF THE STATE AGRICULTURAL SOCIETY OF SOUTH CAROLINA.

1. The name of this society shall be the "State Agricultural Society of South Carolina."
2. Its objects shall be to improve and advance the condition of agriculture and horticulture, and the auxiliary mechanic arts and manufactures.

3. This society shall consist of individual members, upon their paying an annual subscription of two dollars, or twenty-five dollars for life membership; and delegates from such district societies as shall pay an annual contribution of five dollars into the treasury of this society; and that each delegate from such society shall pay a fee of two dollars; and also of such honorary and corresponding members as shall be deemed proper by the society; but no person shall be chosen an honorary member of the society upon any other ground of merit or claim than of distinguished services rendered to agriculture, horticulture, or the mechanic arts.

4. There shall be a president and six vice presidents, and an executive committee, consisting of seven persons, including the president, who shall be annually elected by the society.

5. The society shall meet annually in the city of Columbia, on the second Tuesday in November, at which time there shall be an agricultural, mechanical, manufacturing and stock exhibition.

6. A quorum of the society shall consist of not less than fifty members, and the president shall preside at all meetings, and in his absence a vice president.

7. The executive committee shall appoint an individual who shall act as secretary and treasurer, appoint all standing and other committees of the society, and to make agreements for its annual exhibitions.

8. It shall be the duty of the secretary and treasurer to keep and preserve the books and papers of the society; to prepare its proceedings for publication; to revise all communications before they are published; to receive and disburse the funds of the society, under the direction of the executive committee; to edit an agricultural paper to be published by the society, whenever, in their opinion, its publication shall be deemed expedient; and perform all other duties which they may assign to him; for which he shall receive an annual compensation, to be fixed by the said committee.

9. This constitution may be amended by the vote of two-thirds of the members attending any annual meeting.

A PLEA FOR AGRICULTURAL EDUCATION.*

Something over ten years ago, the writer, as chairman of the committee on agriculture in one branch of the New York legislature, embodied some facts and suggestions on the subject of educating practical farmers, which, having been verified by subsequent experience in that large and populous State, may not be unworthy of consideration by southern planters. The report from which we cite may be found in the sixth volume, second series, of the *Genesee Farmer* for 1845. At that time the best Genesee wheat sold in Rochester at from 75 to 80 cents a bushel, corn at from 37 to 40 cents, and potatoes at 18 to 25 cents. Since then, such has been the increase of population and decrease of the elements of food and raiment in the cultivated land of the State, operating with other less potent influences, that wheat is now selling in Rochester at \$2 70 a bushel, corn at \$1 10, and potatoes at about the same price. Ten years ago, a poor man working out by the day or month on a farm got a bushel of wheat for a day's work; now he is compelled to give three days' toil for the like quantity of grain, or flour made from the same. In the purchase of potatoes the difference is equally great, and against unscientific labor.

These are pregnant facts, and are by no means peculiar to New York in their most significant aspect. In the document referred to we have labored to show, among other things, the essential difference between working to produce property, as by agriculture, and seeking only to acquire it, after it has been called into existence by the productive industry of others. As a general thing, the latter class is better educated than the former, the producers, who rarely study the science of keeping and using property; hence, it is extremely apt to slip out of their possession. The argument, being addressed to laboring farmers, runs in this wise:

"Surely the toiling husbandman needs, if he do not deserve, as many good meals, as much good clothing, and as fine a house as one that merely studies to acquire, not produce, the good things of this world. Nevertheless, the fact is

* From the *Southern Cultivator*.

notorious, that the great body of our rural population somehow contrive to work a little harder and fare a little poorer than any other class in the community.

"We learn from reliable statistics that paupers increase among us, relatively, faster than population. The number that live from hand to mouth, only one step from the poor-house, is increasing with fearful rapidity. There are already more than five hundred thousand people in this State wholly dependant on their daily labor for their daily bread. If the legislature will do as much to teach the producing classes how to keep and enjoy the entire proceeds of their honest toil as it does to teach non-producers how to exchange their shadows for the working man's substance, nine-tenths of our growing taxes for the support of the poor and the punishment of crime will cease forever. According to the official report, the direct State tax for the year 1844 was \$4,243,100. This will soon be \$8,000,000, unless we cease to manufacture paupers, criminals, and needless litigation."

Our southern readers will generally admit that there is something wrong in a system of popular education which yields, as a part of its natural fruit, increasing crops of paupers, criminals, and litigation. Now, as a community consumes the fertility of its cultivated fields, and at the same time increases its population, who does not see that it nourishes in its bosom a thousand seeds of dissatisfaction and malignant discord? After calculating with scientific accuracy the amount of phosphorus in a pauper's brain and nervous system, and the quantity that must yearly enter his mouth taken from the soil, we predicted long ago the present Know Nothing movement against foreign laborers and competitors in New England and New York. The lack of science and the wrong done to arated land are the true sources of a thousand social and political evils. These have their living roots in the earth, and nowhere else. Looking with deep solicitude to the future wants of the children attending our common schools, we said:

"It is not far from the truth to say that 400,000 of the 700,000 children now attending our schools are destined to become practical operatives in the great art of making something into grain, grass, roots, milk, butter, cheese, fat, lean meat, bone, or some of the numerous other products of rural labor. Where that something can be found, and how the raw materials of all cultivated plants should be combined so as to give the largest return for any given amount of capital and labor, are problems in practical husbandry which science alone can solve. The term science is but another name for knowledge. It is, however, usually limited in this connexion to the systematic investigation of the laws of nature; and of all men the practical farmer is most interested in understanding and obeying these wise and salutary laws.

"To make an acre of wheat that will yield twenty bushels, the plants must have twelve pounds of phosphorus. To purchase that amount of this substance, which forms one of the constituents of the human brain, at a druggist's shop, will cost \$24. At present prices, the phosphorus and ammonia annually thrown away in the solid and liquid excretions of man and his domestic animals in this State are worth some \$20,000,000.

"All the farmers of the Empire State should rise up as one man, and insist that the science of good husbandry and that of keeping property shall be taught in all their common schools. The same mental culture which will enable an honest tiller of the soil to double its products, and double the value of his better directed industry, will also qualify him, in a good degree, to keep and enjoy a much larger portion of the net proceeds of his more skillful industry.

"Science is the greatest leveller in the world, but unlike the levelling of ignorance and brute force, it ever levels upward. It takes the highest point of mental attainment already achieved for its standard, and then wisely and humanely elevates all below up to that standard. The object is to make the triumph of mind over matter universal and complete."

This object is as important at the south as it is at the north, and therefore the argument is not out of place in the Cultivator. Nor is the south entirely free from the tendency to overstock the professions of law and medicine, mercantile, and other unproductive (in one sense) pursuits. Hence, the following historical facts and calmly considered suggestions may be worth the space they occupy:

"It is now twenty-six years since the friends of agricultural improvement first made a vigorous effort to establish an agricultural college in this State. Your committee have before them an essay, published in 1819, in this city, (Albany,) of 42 pages, advocating such an institution with unanswerable arguments. Within the last twenty-six years there has been taken from the public treasury about

\$200,000 to prepare candidates for legal honors to study successfully the science of law. We have also four well-endowed medical colleges, now drawing \$5,500 a year besides. Indeed, we have so long paid a large bounty on all branches of unproductive industry, so called, that no young man of honorable ambition will consent to toil and sweat and burn in the sun on a farm for \$12 a month, when, as a clerk in a store, a bank, a broker's office, or as a student in a doctor's or lawyer's office, he can expect soon to command five dollars to one of the industrious farmer, and with one-fifth of the severe bodily labor. Is it possible for all ambitious young men to become professional gentlemen, and not render these professional pursuits utterly valueless? If learning and science are the great highways to honorable distinction and public favor, why deny these advantages to those who do more than all others to feed and clothe the whole community?"

Planters, think of the education of your sons, and wisely determine what position you will have them occupy in an age of advancing agricultural literature and science. Nothing is easier than to give them an elevated stand-point, whether for making and keeping property, or commanding the suffrages and applause of their fellow-citizens in after-life. Receive not unkindly this hint; it is more than possible to neglect human cultivation. Such neglect will tell injuriously, both on a family and the public at large. Nothing would strengthen southern interests so much as the more general and thorough education of those who own the soil. It is a trite saying that "knowledge is power," but, truisms as it is, there are thousands of voters and sovereign rulers who do not understand its bearing on the educational institutions of the country. The improvement of these is, somehow, a most difficult reform to accomplish, although, confessedly, one that is much needed. What is wanted, in addition to all that the public now have, is the plain and effective application of science to all the industrial arts practised by civilized men. Such an application of all the knowledge extant would detract in no respect from its dignity or honor, while it would utilize it a thousandfold. Place science in the heads and hearts of the people, instead of keeping it out of their reach, and they will love and cherish it, as parents do their own children. The real difficulty lies in reaching the masses. It will ever give us pleasure to meet them at their county fairs and county courts, and talk over the true interests of the human family, whether in cultivating man, or the earth from which he was taken and to which his dust must return. If it were possible to talk to the whole people, and explain at length what agriculture most needs at the south, to put to shame northern fanaticism, we feel confident that our humble plea for agricultural education would not be in vain. A kind Providence smiles upon southern tillage, and proclaims the duty of planters to take the lead in the professional instruction of agriculturists on this continent. Do you not feel the inspiration which forbids you to follow the do-nothings at the north, who are fast dividing all their moral and physical powers between fifty conflicting implacable factions? We have studied these factions pretty closely, and might do the public a worse service than to analyze and describe them, but we will not. It is not our mission to complain of popular folly anywhere, but a house divided against itself is in a bad way, whether north or south.

On the important question of promoting agriculture, there is no good reason why public sentiment at the south should not be perfectly harmonious and united.

It is so obviously the paramount interest on which all others depend for support, either directly or indirectly, that the only debatable ground is the fact whether any proposed measure will truly benefit southern tillage and husbandry or not. And to this simple, this plain test, we desire to see agricultural education brought. In this matter no one has a right to expect wonders, much less a miracle. Such expectations would most certainly be disappointed. A good crop of useful knowledge was never made by persons so full of excitement as to jump to their conclusions. Our most useful institutions grow up from small germs, like noble forest trees which have extended both their roots and branches, little by little, every summer for one or two centuries. Such institutions are really worth having; but mark, they should grow, else they are like dead trees, which every year become more unsound and less valuable. No college should be permitted to fall into such a condition. Its friends had better engraft new scions upon some of the most flourishing limbs, and add a good mulching to protect the roots. It is wise to rejuvenate or reform, but inhuman to destroy. Gladly shall we assist in any way in our power to build up and strengthen the educational institutions of the south. They need more funds, more pupils, and more able and earnest teachers.

In this way they will happily exhibit substantial progress and solid growth. Whatever the people desire to learn, and have their children learn, educational institutions should teach. We believe they wish to learn the principles of agriculture and of the mechanic arts, and therefore we advocate the study of these branches of knowledge in schools or universities adapted to such utilitarian objects. Our republicanism induces the belief that there is nothing in learning, nothing in science, which is either too good or too high for any common citizen to command if he pleases.

CAN INDIGO BE CULTIVATED WITH ADVANTAGE IN SOUTH ALABAMA?

Although I have once cultivated and prepared it for market, I have no information that can be relied on. There are two kinds, the wild and tame. The wild gives a first cutting in June, and the other late in the fall, and makes the finest dye. The tame gives its first cutting late in July and one after, and, perhaps, the reason of its being preferred is, that it calls for cutting when the making of the general crop is over, when the tame requires it at the busiest time. It is planted in drills, about two and a half feet apart, or more, and where the use of the hoe alone is intended, which is generally the case in new land, at one and a half feet distance. Being in drills, and a great many to the acre, it will be grassy and very difficult to be kept clean; indeed, so much so, that it is almost exclusively grown in new, or first year's land, to avoid grass. It receives a first, second, and third working by flat weeding with the hoe, much as rice is cultivated. When just commencing to mature, and before the seed is ripe, it is cut by hand with the hand-sickle, or rice hook, in the evenings and mornings, and not at mid-day, as being an extremely tender and delicate plant it wilts too fast. The evening and morning cuttings are immediately carried to the steep vat, where covered under the water and kept down by weights, fermentation rapidly takes place and exudes or separates the sap from the stalks, which are taken out and thrown away. The sap sediment, or exudation in the shape and appearance of mud, is run and scraped through a trough into another vat. This mud must undergo much manipulation to separate its dye from the water. It has to be well worked up with long paddles in the hand, or by rods through a round pole two or three feet long. The poles to be turned by cranks, with journals on their ends, similar to the windlass used in digging wells. Lime water is introduced into this vat to facilitate the separation and to precipitate the feculum. As the mud settles at the bottom, two small augur holes, one above the other, with wooden pin stoppers, let off the clear water from this vat. The mud or dye is scraped up into small flat boxes, carried by hand and placed on stands full of sand, where it drains more thoroughly, and when dry is carried to the dye or indigo house and cut into one or more pound lumps and laid on the shelves to dry more. Laid on a little straw on these shelves allows them to contract a little in drying, as the straw gives to it, which a rough board would not. It is more saleable in lumps than when much broken. When it has a bright copper color it has the evidence of the best quality.

Indigo yields from 20 to 100 pounds to the acre, but about 30 pounds is more common, and sells for from 75 cents to \$1 a pound. On new and tolerably good pine land it is made without much trouble, and the vats without expense, and the crop is soon through. It wants a long and a hot summer to perfect the plant and mature the dye, and it is probable that this climate or that of lower Louisiana would be sufficiently so. The indigo of the East Indies is the best made. The Bengal floatant sells for \$6 a pound, being cheaper than ours at \$1. This is made entirely without the use of lime, for which more manipulation is substituted. It is cut and carried by its growers to the manufactory of the neighborhood, where, with more skill and better means of working it up, a much better article is made. Lime clarifies and precipitates the dye quickly and more in quantity, but at the expense of quality, as it has all to be taken out before it can be used for dyeing. The smell, when the indigo is drying, is strong, but not, I think, unwholesome. It certainly has none of the essence of the otto of roses or cologne about it.

A PLANTER.

Dr. Ramsay, in his history of South Carolina, says that 1,107,660 pounds of indigo were exported just previous to the war of the Revolution.

TURPENTINE.

HINTS FOR THOSE ABOUT TO ENGAGE IN ITS MANUFACTURE.*

SITUATION.—Select your plantation as near a distillery as you can; but you may do a very profitable business six or seven miles off if the country is favorable for hauling. If the distillery is on a river, turpentine may be hauled two or three miles, and rafted down forty or fifty miles, cheaper than to haul to the still over six or seven miles. Yet persons already settled on thin pine lands can do better to make turpentine and haul it ten or twelve miles than at anything else they make for market.

TIMBER.—The best trees are young, thriving, on pretty good soil, of quick growth, having the most sap-wood. If found on low, level, or moist lands, they will yield all the better. Dry seasons are unfavorable for a large crop of turpentine, and, of course, trees on lands that suffer easily from drouth are least profitable. Old yellow pines run badly, and are only worth boxing when standing amidst the better timber.

The thicker the growth stands the better, as close forests are less injured by hard winds than those more open, while the hand has less ground to walk over in attending his task. Forests that will not afford a task of 12,000 boxes on 200 acres or less are hardly worth working unless they are very near the still or water carriage to it.

BOXING.—As the future profit of the business depends chiefly on doing this part of the work well, let it be carefully attended to, observing the following instructions:

1. In our climate (Florida and southwestern Georgia) this work must be done between the 1st of November and the 1st of March, or a little later if the spring is backward and cold, and the turpentine does not begin to run.

2. The boxes must be cut *low down*, in small trees within six or eight inches of the ground, and ten or twelve inches in large trees. This will be at the swell of the roots, where the sap wood is deepest, and the trees less weakened by the cut, and because the drip is more certain to fall into the box when it is cut in the projecting wood. And for this last reason, when the tree is not upright, a box must never be cut on the side to which it leans.

3. The box should be from eight to fifteen inches long, measuring across the tree according to its size. The lower edge or rim of the chop must be a level cut, very smooth, and have a down slope inwards of two or three inches below the outer edge. The depth from three to four inches, capable of holding a quart or more, unless in a small tree. As a general rule, the cut should extend very little into the heart-wood.

4. The size of the tree determines the number of boxes it will bear and keep healthy. Trees under a foot thick should have but one box; those from twelve to twenty inches thick two boxes, and never more than three in any tree. Of course, where the trees are scattering it may be better to cut more boxes, even if the trees do not last as long, than to lose much time with your hands.

5. The task for prime experienced hands is from 450 to 500 boxes a week, or 75 to 80 a day. And some expert hands will gain a day and do their work well. Such hands should be encouraged by receiving pay for extra work. But most beginners will not cut at first more than 50 boxes a day, and there is nothing gained by tasking them too high, until they have got well used to the proper shape and size of boxes.

CORNERING.—As soon as you stop cutting boxes the hands should be set to cutting corners to them. This is done by a straight cut four or five inches up the tree from each corner of the box, and is usually done with two blows of an axe, taking out a chip half or three quarters of an inch deep, which makes a channel to catch the turpentine at the corners of the box, and serves as a guide for the chipping afterwards. A hand will corner 500 or 600 boxes a day. The turpentine from the faces and corners of new boxes will fill them, without further work, for your first.

DIPPING.—This part of the business generally begins about the first of April, a little earlier or later according to the season. But before proceeding to dip, or even to corner your boxes, each task, where there are no natural boundaries, should be marked off by blazing a line of trees. And every task should be further

* From the Alabama Planter.

divided by rows of stakes, fifty yards apart, crossing it both ways, from side to side, which will cut it up into squares of about half an acre. Without this the overseer of several hands cannot possibly inspect their work with any accuracy, nor can the hands, however faithful, avoid skipping a great many boxes in *cornering, chipping, and dipping*.

1. Before you begin to dip, place your empty barrels, thirty-five or forty to the task, at convenient distances, all ready to receive the turpentine.

2. Each hand will require two buckets, holding four or five gallons, so that while one is dipping into the barrel he can work with the other and lose no time. The implement for dipping is made of iron and steel, something like a trowel, with a wooden handle, the blade flat, six inches wide and nine or ten long, with a rounded point, thin at the edges, and a quarter of an inch thick in the centre, and joining the handle.

3. Dipping must commence as soon as the boxes are pretty well filled, charging the hands to watch them, while going over their task to cut corners or to chip, as trees run very unequally, and many will overflow before the rest are full.

4. The number of dippings in a season vary from four to seven as the extremes. Below five, during the first two years, is looked on as poor, and six as very good. An early or backward spring or fall, long drouths, during which the tree almost stops running, or heavy driving rains which fill the boxes with water and float out the turpentine, all have their effect on the number of dippings, which depends otherwise on the frequency and care with which chipping is done. As the plantation grows older, and the chipping extends higher up the trees, you get fewer dippings of *soft* turpentine, and a greater proportion of *hard* or *scrape*.

5. It is not usually necessary to gather the scrape separately until the second winter, after the boxes stop running. It will then be nearly equal in bulk to two dippings. After that it must be gathered every winter, the bulk increasing the longer the trees are tended.

6. For collecting the scrape, instead of buckets, it is better to use a box fifteen or sixteen inches square and ten inches deep, supported on two short legs, so as to rest against the tree. The best implement for gathering scrape is a socket spade, so that the length of handle can be varied with the height of the work. The hard scrape will require to be trodden into the barrels.

7. A hand should dip 1,800 to 2,000 boxes a day, or fill five or six barrels, so as to get over his task in six or eight days. It will require more time to collect the hard turpentine.

CHIPPING.—Next to careful boxing, the length of time that your trees will continue to yield will depend upon the manner chipping is done.

1. The instrument used is called a "hacker" or "ahave" from its resemblance to a cooper's round shave, only that the cutting part should be shaped to a rounded point, an inch or three quarters in diameter, and be supported on a strong spike, to be inserted in a handle of convenient length, according to the height of the chipping.

2. Take care that the chip extends across the tree no wider than the box; and for new or awkward hands it will save much waste to have perpendicular lines drawn up the tree from each corner of the box.

3. From each of these lines the chips should be cut in a down slope towards the centre of the box. Each fresh chip to be cut at the upper edge of the old one, about a quarter of an inch deep into the wood. A narrow chip or cut will bleed as freely as a wide one; half an inch is sufficient. And by this means your trees can be worked longer. If trees are skillfully chipped they will last eight or ten years.

4. A good hand will chip over his task once a week. And, as it is important to have it done by the strongest and most expert hands, these should be kept at it regularly through the season, while women or inferior hands can dip very well. One hand can dip four tasks, while the best hands are kept busy chipping, and should go over the whole four or five times between each dipping. On this plan the boxes first full can be attended to without interrupting the chipper.

HAULING.—One hand strong enough to load, with a pair of good mules and a suitable wagon, will haul the turpentine dipped by ten hands an average distance of three miles, with spare time for hauling provisions, empty barrels, &c.; and in the winter can be employed in hauling barrels, staves, ploughing in oats, or preparing ground for early peas and potatoes, so as to provide a large part of their own forage for himself and team.

BARRELS.—1. The barrel is made thirty-two inches long, including chines, and the head about seventeen inches across, with a little bulge in the middle. The staves and heading of pine, to be three-quarters or seven-eighths of an inch thick, secured with six strong wooden hoops.

2. A barrel of turpentine must weigh two hundred and eighty pounds, and any over and under weight is added or taken off, as the case may be, in calculating all sales. No allowance for weight of barrel.

3. A cooper's task, when working by the day or month, is five barrels. His price is twenty to twenty-five cents a barrel for making, when all materials are found him, and when he finds all, from thirty-one to thirty-seven cents a piece.

4. Heading and staves of heart pine are worth \$5 a thousand. Sap staves one-fourth less, as they are only fit to hold the hard turpentine or scrape. They should be got out and hacked up and dried two or three months before being worked up. Hoop-poles, about six feet long, of hickory, white oak, or water oak, are worth twenty to twenty-five cents per hundred, delivered.

5. In a gang of hands getting turpentine every fifth man may be a cooper, and will be employed the year through in providing his own materials and keeping the others supplied with barrels.

GUARDING AGAINST FIRE.—The evil consequence of getting a turpentine plantation on fire is so great as to justify the labor of hoeing around the boxes, so as to clear away all the grass and pine straw to a distance of four or five feet. This will employ a hand four or five weeks in the winter. The State ought to protect this important interest, by enacting severe penalties against those who set out fire where it can extend among trees boxed for turpentine.

GENERAL REMARKS.—The turpentine business is considered a very healthy employment for hands. It may be carried on with little capital, on lands too poor for cultivation, and is, therefore, well suited to persons of small means. If there is one hand, in the poorest family, able to cut boxes and chip them afterwards, the dipping can be done by women and half-grown children. A poor family, living near a still or river, may make something, even if they hire their boxes to be cut, buy their barrels, and hire the hauling.

On the other hand, no business makes better returns for common labor, take one year with another, not even the culture of cotton and tobacco, especially when the amount of capital employed is taken into consideration. A prime experienced hand, in a plantation newly opened, has gathered \$600 or \$700 worth of turpentine in a year, leaving a net sum of \$400 or \$500, after all deductions for barrels, hauling, provisions, &c. Two hundred dollars per hand, clear of all expenses, including the wages to an overseer, is a very moderate result for an average lot of hands.

The usual price for cutting good boxes is \$1 per hundred, and food for the hand.

Twelve thousand boxes are an average task, in chipping and dipping. Extra prime hands have tended as high as fifteen or sixteen thousand, but ordinary hands will not do justice to more than ten thousand.

Good trees will yield about three barrels to the thousand boxes at each dipping for the first three years, one-sixth of this being *hard* or *scrape* the second year, and one-fifth the third year. The proportion of *scrape* increases as the chipping extends higher up the tree, until it makes half the crop, while the dippings of *soft* turpentine will be reduced to three or even two a year. It will, therefore, be necessary to add some new boxes to the task every year after the fourth, to keep up the profitable business. In young thrifty trees this may be done without increasing the bonds of a task, if the number of boxes was limited at first, as previously directed.

Virgin dip is the name given to all turpentine gathered the first year from new boxes; although the first three dippings make much the brightest and best rosin, and on this account is worth fifty or seventy-five cents a barrel more than—

Yellow dip, which is the name of all soft turpentine taken from the boxes after the first year.

Hard or scrape is the name for the turpentine which hardens on the face of the chipping and never reaches the boxes. This makes a pretty fair rosin, but yields not more than a third of the quantity of spirits, and is worth about half price.

The evaporation of spirits from all soft turpentine is very rapid in hot dry weather, and this makes it important to dip and deliver it at the still without unnecessary loss of time.

Virgin dip will yield about five and a half gallons of spirits to the barrel (of 280 pounds) for the first three dippings, and from five and a half to six gallons later in the season.

Yellow dip, if delivered early, will turn out six to six and a half gallons. The scrape rarely makes as much as three gallons, very often not more than two or two and a half to the barrel.

On an average, all kinds will make two barrels of rosin from three of raw turpentine.

The distiller, therefore, will have three of his barrels surplus, which, with slight repairs, will serve as well as new ones for future dippings.

When virgin dip is worth \$2 50 or \$2 75 a barrel, yellow dip is worth about \$2, and the scrape about \$1 25 a barrel.

To justify the distiller in paying the above prices, spirits of turpentine should be worth forty cents a gallon in the New Orleans market, upon the supposition that the entire expense from the still does not exceed eight cents a gallon on spirits, and forty cents a barrel on rosin. When spirits are selling in New Orleans at thirty-six cents, the raw article is worth twenty cents a barrel less at the still, at the same rate of expense in sending the manufactured article to market.

The distiller incurs great expense in the single article of spirit barrels. These must be iron bound, made in the best manner of seasoned white oak, and well coated within with glue, to prevent evaporation. They should contain from forty to forty-five gallons, and when ready for use cost little short of \$2 a piece. As there must be one spirit barrel provided to every seven of soft turpentine, the demand for these barrels will of itself open an extensive new branch of business. Let these, by all means, be made at home.

A word more at the close. It is said above that a turpentine plantation will last eight or ten years. This is meant for Florida and southwestern Georgia. In North Carolina, with careful working, it lasts twelve or fourteen years. And then begins the business of making tar from trees exactly prepared for it by the previous culture. This is nearly as profitable as making turpentine, and will furnish employment for several years longer.

METEOROLOGY FOR THE FARMERS.

LIEUT. MAURY'S NEW ENTERPRISE.

Lieutenant Maury has presented to the farmers of the United States, through the columns of the American Farmer, the outline of a plan for a general system of meteorological observations on land. The high reputation of this gentleman, his eminent services not only to physical science but to the commercial interests of the country, his practical sense and trustworthy judgment, cannot fail to secure attention to his suggestions.

The plan is simple. It proposes that farmers and planters should co-operate all over the country in a regular and systematic method of meteorological observations. The information so collected as to the winds, rains, and similar phenomena, is to be forwarded to Washington city, and measures are to be adopted to enlist the agency of the government in arranging the facts for publication. There can be no doubt that the government will lend its aid to the furtherance of this great work. Lieutenant Maury states that such an office as will be required in Washington to carry out the details of this plan is already in existence. It was established by Mr. Calhoun when he was Secretary of War, and it is under the control of the Surgeon General of the army. The meteorological observations that are made at our military posts are discussed and published at this office; and "one of the most valuable and interesting reports concerning the meteorology and climates of the country that have ever appeared is now in course of publication there."

The plan, it will be perceived, is similar to the one which has been so successfully adopted on the sea. By the observations which have been made on the ocean, a vast mass of most important and valuable information has been collected. The results of these extended observations have been embodied in the "Wind and Current Charts," which have proved of such immense service to navigation. Other nations, following the scientific lead of Lieutenant Maury,

have united in this useful work, so that now the ocean is literally covered with "floating observatories," and "every ship that sails is converted into a temple of science. It has been estimated that millions of dollars have already been saved to commerce by the "Wind and Current Charts." The farmers and planters of the country have been likewise benefitted; for not only have ships been enabled to make quicker voyages, and at lower rates, but new markets, that were before practically inaccessible by reason of length of time, have been brought within easy reach by the increased facilities of transportation.

If this system of close and accurate observation of the facts of meteorology in all its relations to agriculture, health, and similar matters, is adopted on land, it must result in great benefit to our country. As Lieutenant Maury justly remarks, there are "mighty harvests of many sorts" in these meteorological fields, and we have no doubt whatever, that if the proper spirit of research is applied, we shall have a new era in our knowledge of the wonders of the atmosphere, and its connexion with industry, health, and life. We beg the attention of our farmers and planters to this movement. It deserves the largest and most liberal sympathy. It is fraught with invaluable advantages to every domestic interest of the country. Our agricultural associations ought to take up the subject immediately, and prepare memorials to Congress for the slight aid that might be needed to get it under way.

We publish below a letter to us from Lieutenant Maury on this subject. Though not written for the public eye, we have taken the liberty, in view of the important matter discussed, to lay it before our readers, hoping that its vigorous thought and philanthropic spirit may induce general attention to the views advanced:

CHARLOTTSVILLE, *Virginia, August 23, 1855.*

MY DEAR SIR: I am in want of a champion in Alabama for a good cause, and therefore address myself to you without further apology.

My investigations of the winds at sea have impressed me with the idea that as much may be done for agricultural and sanitary meteorology as has been done for that of the sea. I have so stated publicly, and given the details of the plan in the August number of the *American Farmer*, an agricultural paper published in Baltimore. I will send you a copy of it if I can procure one. The plan is simply that the farmers and planters should lend that sort of co-operation on the land that the merchants and sailors have afforded at sea, and that the government should then do its part by having the observations thus procured, discussed, and published.

There are truth-loving, knowledge-seeking men in every county in every State, who would be glad to co-operate in such a plan. They would readily undertake to make the requisite observations if they were furnished with the needful formulæ, and had the assurance that their observations should be discussed and published for the benefit of all. Nay, there are unreduced observations enough now in the country, lying in the desks of those who made them, from which as much useful information may be gathered as we culled from the old log-books; and I have no doubt that the desks and drawers of meteorological observers on the land would open quite as readily to the call as the old sea-chests of the mariner did. As for the trial to see what a systematic plan of observations will do for the advancement of agricultural meteorology and for the benefit of farmers and planters, I'll answer for the observations if government will furnish the means for their discussion and publication. I'll go further, and promise that the observations shall be furnished to the government for such a purpose *without cost*. You know the materials for the "Wind and Current Charts" were all furnished gratuitously, and that without asking government for a single cent we have literally covered the ocean with floating observatories, and converted every ship that sails into a temple of science. Not only governments but nations and people have united with me, and are assisting to carry out a system of meteorological research for the sea. As much may be done for the land if the planters and farmers of the United States will only second the effort, and tell their representatives in Congress that they want as much done by the government for agricultural and sanitary meteorology as it has *permitted* to be done at sea for the benefit of commerce and navigation. By the saving of time on the voyage, and the lessening of the dangers by the way, these interests, it has been computed both in this country and England, have been benefitted to the extent of millions annually. Some of

these benefits have inured also to agriculture, not only by giving an opportunity to the farmer to get markets beyond the sea cheaper, and enabling ships to fetch and carry for him at lower figures, but by bringing within reach markets which before were inaccessible by reason of the great length in time of the voyage.

Let us, therefore, extend this system of philosophical research to the land. It is very rich with promises of good, it will cost literally *almost* nothing, and will not the planters of Alabama, as well as the agriculturalists and agricultural societies of the other States, lend me a hand in "getting it under way?" * * *

Yours, truly,

M. F. MAURY.

REV. DR. LIPSCOMB, of *Southern Times*, Montgomery, Alabama.

AGAVA PLANT.

As this plant is becoming one of great importance to the country, a few remarks in relation to it will, no doubt, be interesting to the public.

It is a species of the "cactus," indigenous to South America, more particularly to that portion termed the Spanish Main, where it grows spontaneous in great abundance. The leaves of the plant are prepared into hemp, (called sisal.) Its sale in our market amounts to several thousand tons annually, at prices varying from \$200 to \$250 per ton.

Many years ago an enterprising gentleman, Dr. Perrine, a native of France, attempted to propagate its growth in this country at Key West and adjacent islands. Death, resulting from Indian hostilities in the vicinity, arrested him in his laudable endeavor. Since that period little attention has been given to its cultivation. The large demand, however, latterly, for the article, for manufacture into cordage, and that, too, at a high price, has produced an incentive among the citizens of Key West to turn their attention to its culture, at which place it grows to a limited extent, as will be shown by the following extract of a letter from a resident there:

"The sisal hemp is very successful. The plant (*Agava Sisalana*, or *Americana*) grows in the poorest kind of land; and even on the stony, barren island it grows very well. There are a few acres here just ready to be cleaned out for market; and it has been ascertained by experiment that an acre will yield one thousand dollars per annum after the fourth year. It requires no cultivation; just drop the seed in the ground, and you have nothing more to do with it for four years, when you can begin to cut and clean. The suckers are constantly springing up, so that by the time you cut down the first crop the second is ready to begin with, and so on until the land is entirely exhausted."

Some nine years ago my attention was called to the weed by a gentleman from Florida, with a view to encourage its growth and to prepare it into hemp. The principal difficulty in the process was found in converting the leaves into hemp by machinery. To give facility to the operation, the ordinary mode of cleaning them (as practised by the natives of South America, where labor is of little or no value) being too tedious, I suggested a method (the one now in use at Key West) which gave facility to some extent, but which does not answer the purpose sufficiently well to make the enterprise profitable.

I also directed my attention to the best mode of cleaning the leaves by requesting the attention of some scientific gentlemen, Professor David A. Wells, of Springfield, Massachusetts, among others, to the discovery of some chemical process for the purpose, who hit upon a quick and cheap process. It, however, discolored the leaves to an extent which made them unsuitable for cordage.

Subsequently, at the request of Senator Mallory, I addressed a number of the eastern machinists on the subject, who, with much spirit and zeal, entered upon the experiment for devising a proper plan; and I am now happy to believe that this object is likely to be effected. As a proof of this, I give here an extract of a letter from Messrs. Kellogg & Co., of Pine Meadow, Connecticut. They say:

"The machine about which we wrote you March 20th, cleans the 'Agava plant' to our entire satisfaction. We had to make some little alteration in the construction of it after receiving the plant, but we have retained the principle. It works charmingly." D. M.

*Export of breadstuffs from the United States to Great Britain and Ireland, from September 1, 1854, to September 1, 1855.**

From.	Flour.	Meal.	Wheat.	Corn.
	<i>Barrels.</i>	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
New York.....	102,838	1,620	227,380	4,977,680
New Orleans.....	26,453	55	8,794	645,166
Philadelphia.....	13,635	3,624	33,078	885,203
Baltimore.....	8,015	104	24,526	321,193
Boston.....	76	3	5,000	14,000
Other ports.....	19,312	130	18,935	.....
Total.....	170,329	5,536	317,713	6,843,242
Last year.....	1,824,920	40,660	5,918,317	6,215,936
Increase.....	.....	.....	.....	627,306
Decrease.....	1,654,591	35,124	5,600,604	.....
Total year ending Sept. 1, 1855....	170,329	5,536	317,713	6,843,242
Do.....do.....1854....	1,824,920	40,660	5,918,317	6,215,936
Do.....do.....1853....	1,618,060	683	5,543,460	1,517,087
Do.....do.....1852....	1,444,640	1,810	2,712,120	1,576,749
Do.....do.....1851....	1,581,702	5,553	1,523,908	2,368,860
Do.....do.....1850....	463,460	6,086	463,015	4,873,446
Do.....do.....1849....	1,118,316	86,058	1,091,385	12,729,626
Do.....do.....1848....	183,533	105,350	251,622	4,581,367
Do.....do.....1847....	3,150,689	847,280	4,015,134	17,298,744

*From the able commercial letter of Neuffer & Hendrix, Charleston, S. C.

NOTICES OF BOOKS.

Japanese Botany—being a fac simile of a Japanese book, with notes and translations; Lippincott & Co. publishers, No. 20 N. 4th street, Philadelphia.

This book is a copy of a Japanese book—not only in contents but in form. It contains about thirty spirited engravings of plants and flowers, with descriptions, all copied by the anastatic process. Among the pictures we recognise several old acquaintances, from which we may infer that the Japanese vegetation is similar to our own. There are two translations, a literal one conforming to the Japanese idiom, and a free translation of better English. The introduction contains an explanation of the alphabet, the numerals and manner of counting, the names of the months, and the time of day, measures of length and distance, &c. Besides being a valuable acquisition to the student, we consider this curiosity an appropriate ornament for the drawing room table.

Maud and other Poems; by Alfred Tennyson: Boston, Ticknor & Fields. The poems include "The Brook," "The Letters," "On the Death of the Duke of Wellington," "The Daisy," "Will," "The Charge of the Light Brigade."

Memoir on Meteorites; by J. Lawrence Smith, Professor of Chemistry in the University of Louisville. Dr. Smith has at a very early age established the reputation of being at the head of the list of American chemists. His lectures at the Smithsonian Institution, in Washington, were crowded for weeks with the best audiences that had ever assembled in the city. In the Memoir before us his high reputation is ably maintained.

Our thanks are due to Dr. E. Barton, of New Orleans, for a pamphlet in reference to his *Sanitary Report*; and we are glad to learn that this able and important work is to be republished at the north in a manner which will do credit to the value of the subjects which it discusses. At an early day we intend an analysis of the work for the pages of the Review.

We are also indebted to William S. King, recording secretary of the United States Agricultural Society, for the programme of its third annual exhibition, to be held in Boston on 23d to 26th of October, 1855. Ten thousand dollars has been offered in premiums, and twenty thousand dollars raised to defray the expenses of exhibition.

DE BOW'S REVIEW.

NOVEMBER, 1855.

INTEROCEANIC COMMUNICATION.—COMMERCE WITH THE EAST.

THE ATRATO AND TRUANDO CANAL TO CONNECT THE ATLANTIC AND PACIFIC OCEANS.

For centuries the civilized nations of the earth have, from time to time, directed their attention to the importance of shortening the passage to, and facilitating communication with, the rich and productive countries of the East.

As long ago as when Carthage was in the days of her greatness, efforts were made to navigate the Red Sea and the Persian Gulf, and the wealth and grandeur of Venice was mainly derived from her trade in silks, purple and fine linen of India, with the transhipments into the interior of the surrounding countries and dependencies.

The discovery of the passage of the Cape of Good Hope changed the direction of trade, and threw the control of the commerce of the world into the hands of those nations conducting it, and our own continent takes its place on the map of the civilized earth from the same burning desire. Columbus sought a passage to the far-famed "land of spices, myrrhs and cloths pleasant for kings to look upon."

The English, in later times, have spent millions of treasure hoping to find a northwest passage. But the icy shores and frozen seas of the north have so far checked all progress in this direction, notwithstanding many a manly heart and daring spirit has toiled and suffered long for its accomplishment.

It is known that a passage does exist around the northern coast of North America, but it is for all commercial purposes utterly impracticable, and must forever so remain.

The physical geography of America, in consequence of the proximity of the western with the eastern shores, indicate the route to exist, if at all, within the tropics, and half a century

ago the subject received very great attention from that great and learned explorer the Baron Von Humboldt. In his political essay on the kingdom of New Spain he mentions three distinct routes as more likely to afford the necessary facilities than any others, namely, by way of Nicaragua, Panama and the Atrato river.

The Panama route had long before been looked upon favorably and had received some attention. The route by the Lake Nicaragua was less known.

As early as the beginning of the present century the English had explorations made of the Isthmus of Panama, and in 1843 the French government directed the chief of the corps of sappers and miners, M. Garilla, to locate a canal from Chagres, on the Atlantic, to Panama, on the Pacific.

Subsequently, many surveys were made by the orders of different interests at Nicaragua.

At Panama a canal of sufficient proportions to be commercially useful was deemed impracticable, in consequence of the enormous expense that would be necessary to construct reservoirs to feed the summit level and the great number of locks required.

At Nicaragua a canal can be built, but it would require flights of *twenty-eight* locks, and then would only be competent to perform a very limited service. But up to a comparatively recent period the third point, namely, the Atrato river, was entirely overlooked and neglected, probably on account of the apparent breadth of the isthmus at this locality. Strange as it may seem, nevertheless this line possesses favorable features not known to either of the others. It is incomparably preferable for a water communication between the two oceans.

How long this route might have remained unknown had not the wants of commerce imperatively called for it, no one can tell, and it was not until an enterprising American citizen, about four years ago, seeking for a solution of the great problem of the best route for the trade of the world to take to the East Indies and our western Pacific possessions, encountered Humboldt's opinions; and knowing all the advantages and disadvantages of the Isthmus of Panama and the Lake Nicaragua, determined to have explored the third line indicated, that by way of the Atrato river. This citizen was Frederick M. Kelley, of New York.

Mr. Kelley having satisfied his own mind that the probabilities were in favor of the Atrato route, engaged the services of engineers, and has had the entire valley of the Atrato thoroughly explored.

It is needless to refer to the perplexities and difficulties that

have presented themselves during the past three years. The researches that have been made extend over a country nearly or quite as large as the State of Virginia. Most of the examinations were conducted on the rivers or through impenetrable thickets, that had to be cut away foot by foot to afford a passage.

No less than four complete corps of engineers, with their assistants, laborers, boats, tools, instruments and camp equipment have been fitted out, and have traversed and explored the country, and while the result of other expeditions, in some cases disastrous and in others unsatisfactory, having for their object the same desideratum, were heralded to the world, the explorers on the Atrato and its tributaries quietly pursued their labors, unheard of and unknown except by a few friends of the undertaking, who anxiously and solicitously watched them.

It is these researches, undertaken and pursued so unostentatiously but so perseveringly, that have been crowned with such signal success.

The Atrato river lies very nearly on the seventy-seventh meridian of west longitude; its debouche is in the Gulf of Uraba or Darien, at the point where the coast takes a decided change to the southeast below the Isthmus of Darien. The valley of the river is about three degrees in length and one and a half degrees in width. The river itself, measured through its meanderings, is upward of three hundred miles in length. It enters the ocean by nine mouths or bocas. The water on the bars at these mouths is quite shallow, not exceeding four feet in depth, but the bars are only alluvial deposits and may readily be removed, either by dredging or by turning the river from three or four of the channels into one, and thus scouring the bar out into deep water. Outside of the bars there is from four to seventeen fathoms of water, in an excellent harbor, safe and sheltered at all times, and capacious as New York or San Francisco. Within the bars the river deepens suddenly, and for sixty-five miles up it maintains at all seasons an average depth of seventy feet. The least depth anywhere in this distance is forty-seven feet. It varies in width from a quarter of a mile to two miles.

The river is navigable for steamboats drawing ten feet of water to the town of Quibdo, 220 miles from its mouth, and in this great distance is unobstructed.

By reference to the accompanying map, the general outline of the country and the direction of the proposed inter-oceanic communication will be understood.

The route lies up the Atrato river sixty-three miles, it then follows a tributary from the left side of the valley, called the Truando, which is now navigable for steamboats drawing twelve feet of water for thirty-eight miles from its confluence with the Atrato.

The Truando follows through an alluvial basin, in many places filled with water and intense vegetation, forming lagoons or lakes somewhat similar to the everglades of Florida. The bottom of this river is soft mud.

From the head of navigation on the Truando to the Pacific ocean is twenty-five miles.

The route from where the waters of the Truando are left lies first through clay slate of the secondary formations, then through primitive rocks of the gneiss order, thence through an anteclineal axis of columnar basalt, with a repetition in corresponding positions of the primitive stratified rocks and secondary slates, which are found on the shores of the Pacific.

Between the Truando and the Pacific the cutting will be deep. The summit of elevation through the divide is five hundred and six feet above mean tide in the oceans, but the sides of the water-shed are very steep, and the connexion is proposed through a tunnel three miles and a quarter in length. At the Pacific terminus there is an excellent harbor, called Kelley's inlet, capable, with slight improvements, of accommodating the trade of the world.*

The point of confluence of the Atrato and Truando having been determined instrumentally to be fifteen feet and two-tenths of a foot above the mean tide of the two oceans, which is a true level, it is proposed to deepen the bed of the Truando, and to make an open cut to the Pacific.

The canal contemplated is to have a depth of water of thirty feet, and two hundred feet wide.

The distinctive features of this route will then be, that of good harbors at the termini, thirty feet depth of water way at extreme low tide through the entire distance, two hundred feet wide, and without any *locks* or *gates* or *obstructions of any kind* from one ocean to the other, and sufficiently capacious to pass two of the largest ocean steamers.

The tides on the Pacific vary in the quantity of rise and fall at different places on the coast. At the proposed terminus of the canal, or Kelley's inlet, there is about twelve feet, at the Bay of San Miguel there is about twenty-eight feet, near Panama there is upwards of thirty feet, further up the coast there is more; but on the Atlantic side the tide does not

* This inlet lies in latitude 6° 57' 30" north.

exceed twenty-two inches rise and fall from Chagres to Carthagena, and is nearly uniform this entire distance.

The mean level or half way between the average high and low waters in the two oceans is exactly the same height.

Now, it will be readily seen that if an open cut was made at any point on a true level from one ocean to the other, the tides of the Pacific rising more than the tides of the Atlantic, and a little later, in consequence of the difference of longitude, the water of the Pacific would flow through into the Atlantic at high tide with great velocity, and *vice versa*, at low tide, if the connexion were made at any point on the Isthmus of Darien.

But on the line via the rivers Atrato and Truando, the ascent of the river attaining an elevation greater than that of high tide in the Pacific, the summit will never be overflowed by the waters from that ocean.

Again, as the Atrato continues to rise in ascending it, if it were proposed to connect it with the Pacific from a point much higher up than the mouth of the Truando, locks would be necessary to make the descent into the Pacific. As it is, however, the natural facilities that exist for making the connexion with the Pacific occur very nearly on a line that would be determined theoretically as the true point of junction, because from the mouth of the Truando to the Pacific is within a mile and a half the same distance as to the mouth of the Atrato, and the current would run from here in either direction with the same velocity, or nearly so, thus, as it were, by a great river having two mouths, one entering either ocean.

By this location the Atrato river becomes the feeder of the summit level, and, by comparison of the sections of the river and the prism of the canal, it is found that the depth of water in the Atrato will only be reduced *four feet*, if all that is necessary to supply the open cut should be drawn from it, and the Atrato at this point is fifty-eight feet deep.

This, however, will not be the case, as the Truando has many tributaries, and the great lakes and lagoons and the flow from the Pacific at high tides will afford such a quantity that by estimation the Atrato will be reduced less than a foot.

A very important feature in this enterprise is the healthfulness of the country where the work is to be done.

The river Atrato and its valley is unhealthy beyond doubt, as the continual rains cause the miasma of decaying vegetation constantly to load the atmosphere; but the heaviest portions of the work lie in a country altogether different.

The salubrious winds of the Pacific constantly blow upon the water-shed of the Cordillera range, and here is found the most delightful of all tropical climates. Cool at night, and not immoderately heated in the day time, the land produces in the most luxuriant manner everything desirable for the food of man and animals that usually grow in the most favored regions of the tropics.

The opinion of those who have given much time and attention to the subject is, that this region will sustain as large a population as any part of the island of Cuba of similar extent.

The valley of the Nerqua and the dividing ridge, together with the Hingador valley, and the whole coast from Humboldt bay to the settlements on the Jurador, in fact, the entire slope of the divide on the Pacific side is peculiarly healthy.

The total number of men that will be necessary to do the work on the whole line is estimated at twenty-five thousand, and that number will require to be kept constantly at work for twelve years.

The facilities that exist for obtaining workmen are very ample. Careful inquiries have been made concerning the natives of the adjoining provinces, who are said to be faithful and industrious men, and the opinion is formed that at least six thousand workmen could be counted on as a constant supply.

The Jamaica negroes also can be relied on in great numbers. It will, however, probably be necessary to institute a regular system of immigration from Europe and Asia.

When the work on the canal is once organized, and sufficient workmen are on the ground, from five to six thousand per year will be sufficient to supply the places of those who may die or remove from the works.

The supplying of this great legion with the comforts and necessaries of civilized life will be carried on similarly to that of an army in quarters and under a properly organized commissary department.

Supplies can be brought from all parts of the world to the mouths of the Atrato, and transhipped by steamboats (when the bars are cleared away) up the river directly to where the excavation commences.

On the Pacific the facilities are very great, for there being fine accessible harbors, supplies can be brought almost immediately to the work from Chili, Peru, Sandwich Islands, California, and Oregon; also that part of the country west of the mountains is particularly well adapted to cultivation, and fruits of many kinds grow in great profusion and spontaneously.

A summary of the estimated cost of the canal and appurtenances :

Works at the mouth of the Atrato - - - -	\$50,800
Subaqueous excavations on the Truando - -	1,360,000
Excavations, including coffer dams, &c., at the junction of Truando and canal - - - -	40,000
Excavation between above junction and the Pacific, (excepting the tunnel,) at 87½ cents per yard - - - - -	77,883,994
Tunnel, at \$2 per cubic yard - - - - -	25,403,840
Harbor improvements, depots, hospitals, light-houses, piers, &c. - - - - -	375,000
Cost of the several departments, including supplies for do., &c., - - - - -	1,962,000
25 pumping and hoisting engines for the work in the great cut - - - - -	1,250,000
	<hr/>
	108,325,634
Contingencies 25 per cent. - - - - -	27,081,408
	<hr/>
	135,407,042
If the rock is estimated at \$1 per cubic yard, this would be extra, with contingent allowance, about - - - - -	10,000,000
	<hr/>
	<u>145,407,042</u>

It is not pretended that the above is more than an approximate estimate ; it is, however, believed to be ample.

The dredging is generally done for one-half what is here allowed, and rock work, in this character of material, for much less than the estimate.

It may be remarked, in connexion with this estimate, that this prism is intended to pass two of the largest class of sea-going vessels abreast, and without locks.

That a saving of many millions of dollars may be effected by changing the plan there is no doubt.

Width for but one ship at a time, with frequent turnouts,

Calculations relative to the commercial value of the canal : might be estimated for, and by putting one or more locks on the Pacific the depth of cutting through the rock might be correspondingly reduced.

All this, however, would not produce a perfect work, and therefore is not estimated.

Table showing the saving of time from New York by the new route, via the Isthmus of Panama, as compared with the old routes, via the Cape of Good Hope and Cape Horn, to the places therein named, estimating the distance which a common trading ship will sail per day to be 110 miles, and calculating for the voyage out and home.

To—	Distance via Cape of Good Hope.		Distance via Cape Horn.		Dist. via Isthmus of Panama.		Savings by the Isthmus over Cape G. Hope.	Savings by the Isthmus over route via Cape Horn.
	Miles.	Days.	Miles.	Days.	Miles.	Days.		
Calcutta	17,500	318	23,000	418	13,400	244	74	174
Canton	19,500	354	21,500	390	10,600	192	162	198
Shanghai	20,000	362	22,000	400	10,400	188	174	212
Valparaiso .....	.....	.....	12,900	234	4,800	86	.....	148
Callao .....	.....	.....	13,500	244	3,500	62	.....	182
Guyaquil .....	.....	.....	14,300	260	2,800	50	.....	210
Panama .....	.....	.....	16,000	290	2,000	36	.....	254
San Blas .....	.....	.....	17,800	322	3,800	68	.....	254
Mazatlan .....	.....	.....	18,000	326	4,000	72	.....	254
San Diego .....	.....	.....	18,500	336	4,500	82	.....	254
San Francisco .....	.....	.....	19,000	344	5,000	90	.....	254

The immense saving of time by the isthmus route has attracted the attention of all interested in commerce since the American continent was first discovered.

Cortez, about three centuries ago, searched in vain for a natural passage between the two oceans, and many others followed the same course. When a canal was first proposed, English capitalists joined heartily in the scheme, and the shrewdest foreign merchants and bankers have been ever ready to listen to any suggestion for its accomplishment. If this were considered important twenty years ago, how much more so now, when the trade between Great Britain and her Australian colonies and other near ports has increased from \$3,000,000 to \$75,000,000; when California has opened to the commerce of the world her golden gates, and Japan is ready to renew, on a grander scale, her share in the trade of the world.

The trade between California and Atlantic ports will soon be almost sufficient of itself to support such an enterprise as we propose. The total amount of freight money paid at San Francisco for the year ending January 1, 1853, was \$11,752,084; nearly all of which was for cargoes that went from northern ports around Cape Horn. The following is a summary of these payments:

Payments as freight money at the port of San Francisco during the year 1853.

Months.	From eastern and domestic ports.	From foreign ports.	Total.
January	\$981,773	\$204,172	\$1,185,945
February	611,609	188,756	800,365
March	927,670	254,079	1,181,749
April	727,203	191,174	918,377
May	811,728	139,077	950,805
June	776,069	147,394	923,463
July	1,440,341	78,668	1,519,009
August	998,917	188,813	1,187,730
September	894,649	105,185	999,834
October	797,575	127,672	925,247
November	506,311	159,267	665,578
December	437,587	56,395	493,982
Total	9,991,432	1,840,652	11,752,084

The above only shows the freight money actually collected at the port of San Francisco. Vessels from Europe, and many from domestic ports, received a great portion of their freight at the port of clearance, and this, of course, is not included. This is true to a still greater extent of the commerce of 1854, a large portion of the freight money not being collected at San Francisco, and yet the total thus collected in that year amounted to \$5,311,022, as will appear from the following summary :

Payments as freight money at the port of San Francisco during the year 1854.

Months.	From N. York.	Boston.	Other Atlantic ports.	Foreign ports.	Total.
January	\$482,458	\$196,603	\$17,466	\$149,983	\$846,510
February	238,336	321,896	32,480	164,861	757,573
March	160,181	120,180	40,364	152,347	473,072
April	193,766	141,200	10,000	43,951	388,947
May	195,433	135,693	9,350	50,913	391,389
June	134,000	109,581	26,611	104,503	374,695
July	137,986	103,485	3,801	32,441	277,713
August	221,536	38,861	39,703	122,837	422,937
September	210,716	146,754	3,000	75,037	435,507
October	202,103	65,248	46,670	36,711	350,732
November	146,985	96,201	15,623	42,628	301,437
December	149,327	67,317	.....	73,866	290,510
Total	2,472,827	1,543,019	245,068	1,050,108	5,311,022

The tonnage engaged in the California trade is very large, the arrivals at San Francisco, in 1853, being 1,028 vessels, amounting to 558,755 tons, and the clearances 1,653 vessels, amounting to 640,072 tons; in 1854 the arrivals were 620 vessels of 406,114 tons, and the clearances 1,193 vessels of

515,861 tons; of the above, a very large proportion came from the Atlantic via Cape Horn.

But the trade of California, large as that is shown to be, is not the chief reliance of the friends of the proposed canal. The trade between the United States and foreign Pacific ports has been in a great measure overlooked by those not directly engaged in it, and its importance has never been sufficiently estimated. We have obtained from the department at Washington some reliable information upon this subject, which will be found full of interest.

These statements show that the total clearances from the United States to foreign Pacific ports and arrivals from the same have increased about 200 per cent. since 1849, the tonnage showing a still larger increase, (owing to the larger vessels employed,) while the total imports and exports have doubled during the same space of time. This will fully appear from the following summary, taken from official returns:

Commerce between the United States and foreign Pacific ports.

Fiscal years.	Number of vessels.	Tonnage.	Value of imports and exports.
1849 - - - -	626	244,035	\$17,001,320
1850 - - - -	1,148	383,574	18,402,103
1851 - - - -	2,040	673,619	21,375,428
1852 - - - -	1,693	661,980	27,013,110
1853 - - - -	1,803	787,707	31,554,653
1854 - - - -	1,858	957,599	33,953,456

The above is totally exclusive of the commerce between the Atlantic ports and California, and presents an increase of trade truly astonishing. In order to show the materials from which the above is compiled, we annex the details for the last year mentioned.

Commerce between the United States and foreign Pacific ports for the year 1854.

	Entered from.		Cleared to.		Exports.	Imports.
	Vessels.	Tons.	Vessels.	Tons.		
Dutch East Indies...	20	8,986	18	7,951	\$184,776	\$1,041,609
British East Indies..	96	58,043	64	46,397	636,412	5,378,321
Australia.....	19	8,342	105	44,410	3,149,079	214,202
Manilla.....	37	24,549	20	17,641	74,502	2,965,282
Chili.....	107	41,719	112	44,774	2,193,259	3,332,167
Peru.....	278	179,722	251	158,510	685,155	1,005,406
China.....	107	70,426	121	87,205	1,398,088	10,506,329
Minor Pacific ports..	123	42,264	155	50,560	952,815	10,103
Do..Indian ocean.	6	1,352	6	3,814	200	60,730
Japan.....	.....	.....	1	500	.....	.....
Sandwich Islands...	73	23,738	69	21,252	55,891	119,130
Northwest coast....	29	6,490	39	8,954	.....	.....
Totals.....	895	465,631	961	491,968	9,320,177	24,633,279

Of this 1856 vessels, amounting to 957,599 tons, and carrying \$33,953,456 value of merchandize, it is evident that nearly every sail would pass through the ship canal at the Isthmus, if such an one were constructed.

In further confirmation of this, we can see what preference was given to the clippers over ordinary sailing vessels, time being reckoned of so much value. We can hardly conceive it possible for a ship, clearing from New York for San Francisco, to prefer a voyage of 19,000 miles, when, by the use of a ship canal, without danger or detention, it could shorten the distance to 5,000 miles! The interest upon the ship, the value of the cargo, and the cost of victualling and sailing the vessel, to say nothing of the dangers incident to a protracted voyage around the southern point of the continent, would determine every vessel making a voyage from any American port on the Atlantic, to any port in the Pacific, to adopt the advantages offered by the canal.

The trade between the various European states and the Pacific is large, and much of it, undoubtedly, would pass through the canal if such a channel of communication were completed. The following will show the number of ships, the tonnage, and the imports and exports between France and the Pacific ports during the year 1852.

	Vessels.	Tons.	Imp'ts and Exp'ts.
			<i>Francs.</i>
British India - - - - -	54	18,250	45,200,000
Society Islands - - - - -	81	23,666	40,300,000
Peru - - - - -	32	11,051	25,200,000
Chili - - - - -	7	2,178	19,300,000
French India - - - - -	25	7,886	13,400,000
Dutch India - - - - -	16	5,076	7,300,000
Phillippine Islands - - - - -	4	1,252	1,700,000
China - - - - -	3	912	1,100,000
Bolivia - - - - -	1	500	100,000
Total - - - - -	223	70,771	153,600,000

Showing a total of 223 vessels, 70,771 tons, and imports and exports amounting to 153,600,000 francs, or over \$30,000,000, for the trade of a single year.

In turning to the trade of Great Britain, we hardly know where to draw a line as to the portion of her immense commerce likely to avail itself of the advantages of the new route. Her direct carrying business between her own East

India possessions and the home ports is nearly \$100,000,000 per annum, while to that is to be added the China and other East India commerce. Her traffic between the ports in the United Kingdom and the western coast of North and South America would certainly seek the new channel, and this, reckoning the cargoes both ways, now amounts to upwards of \$30,000,000.

The most important branch of British trade certain to pass through the canal is that connected with Australia; and here, lest we might be accused of exaggeration, we prepare to give the official figures.

The following are the declared values of imports and exports at the colony of Victoria for the years 1853 and 1854:

Imports.

	1853.	1854.
Building materials - - - - -	£2,004,793	£2,436,071
Dry goods - - - - -	2,869,542	3,592,093
Iron and iron manufactures - - -	1,059,261	1,354,653
Leather and leather manufactures -	461,994	527,311
Provisions and groceries - - - -	1,460,245	1,701,203
Specie - - - - -	1,163,344	87,480
Spirits - - - - -	1,015,053	838,704
Sugar and molasses - - - - -	486,614	427,061
Tea - - - - -	205,364	292,837
Tobacco - - - - -	357,396	194,423
Wine - - - - -	373,524	409,075
Miscellaneous - - - - -	4,385,502	5,858,396
Total imports - - - - -	15,842,637	17,720,307

The following will show from what countries the above were imported:

	1853.	1854.
Great Britain - - - - -	£8,288,226	£11,050,329
British West Indies - - - - -	14,973	20
British North America - - - - -	13,560	60,238
Other British colonies - - - - -	5,036,311	4,394,936
United States - - - - -	1,668,606	994,692
Other foreign States - - - - -	820,961	1,220,092
	15,842,637	17,720,307

Exports from Victoria.

	1853.	1854.
Gold - - - - -	£8,644,529	£8,255,550
Wool - - - - -	1,651,871	1,618,114
Miscellaneous - - - - -	765,143	1,901,540
Total exports - - - - -	11,061,543	11,775,204

The following will show the countries to which the above were exported:

	1853.	1854.
To Great Britain - - - - -	£9,875,624	£10,270,213
To British colonies - - - - -	942,741	1,378,107
To United States - - - - -	19,646	50,933
To other foreign States - - - - -	223,532	75,951
Total exports - - - - -	11,061,543	11,775,204

These statements, showing a total of £39,495,511, imports and exports, for a single year, would be almost incredible were they not taken from the official returns.

We might go further and give in detail the commerce of each of the South American States bordering on the Pacific, whose trade has wakened into new life within the last two or three years, but the foregoing will serve the purpose of illustration.

These are not estimates of a commerce like to be created by the construction of a canal, but statements of a commerce now in being, a large portion of which would avail itself at once of this interoceanic communication. With such a business before us, the contemplated cost of the canal sinks into comparative insignificance. A very small tax upon such an immense amount of tonnage would keep the works in repair, and pay a large interest upon the capital expended. To say nothing of the lessened risk and the consequent reduction in cost of insurance, the convenience to the world of such a speedy transit from ocean to ocean without breaking bulk or unbending a sail can hardly be over-estimated.

The wrecks which strew the tempestuous coasts around the lower extremities of the two continents, or repose far beneath the surface of their heaving billows, will be left alone without the annual additions made to their sad catalogues by fresh disasters.

Calculations relative to the commercial value of the canal :

The freight paid at San Francisco on goods from the Atlantic, in 1853 alone, being only a part of the trade, as some freights were paid before shipping, was \$9,911,432. At least three-fourths of this would be saved—\$7,433,574, or interest at 6 per cent. on - - - - - \$123,892,900

The foreign trade to San Francisco that would be benefitted one-half, saving of freight paid at port in 1853, \$1,840,650 ; saving on which would be \$920,325, or the interest at 6 per cent. on - - - - - 15,338,750

The United States foreign Pacific trade was carried on in 1854 in 961 vessels bound out, and 895 entered home, showing that the trade is equal to over two-thirds that of our domestic California trade, and would, therefore, by passing this canal, save a sum, interest at 6 per cent. on - - - - - 99,450,570

Thus showing that the canal would save to the United States alone the interest on the sum of - - - - - 238,682,220

The saving that would be made to the Pacific trade of France would be a sum equal to the interest at 6 per cent. on - - - - - \$90,000,000

The British trade through this canal, even not estimating an increase, if taken in the same ratio as the foregoing, would be equal to interest on \$540,000,000. Considering facilities by way of Cape of Good Hope, say interest on - - - - - 300,000,000

The statement would then be :

United States	- - - - -	238,682,220
France	- - - - -	90,000,000
England	- - - - -	300,000,000
Other countries	- - - - -	100,000,000

728,682,220

Cost of canal, 6 per cent on - - - - - 200,000,000

Saving to the world, 6 per cent. on - - - 528,682,220
 Or twelve per cent. profit on the cost of the canal at \$200,000,000, and a benefit to the world at large of the saving of interest at 6 per cent. on \$328,682,220 annually.

The above figures, although made from the official returns,

are only approximate, as they do not include many items of trade that now exist, and no allowance is made for the increase of trade whatever.

The data are taken from Mr. Stone's commercial statements.

The principal engineers that have been employed on these surveys are Mr. John C. Trantwine, of Philadelphia, Mr. Porter, of Ohio, Mr. James C. Lane, and Captain William Kennish, of New York.

Mr. Trantwine surveyed the Atrato and San Juan to their sources. Mr. Porter and Mr. Lane examined the connexion between these rivers. Captain Kennish, also, as well as these gentlemen, examined the Atrato all the way to the ocean, as well as its mouths.

Mr. Lane ascended the Truando to the saltas or falls, and suggested the line by this route. Captain Kennish made the surveys for the location upon which the estimates have been predicated by Edward W. Serrell of New York. It is due to Captain Kennish to say that he appears to have been the first engineer to suggest the connexion of the oceans by an open cut, which is in reality two mouths of a great river, one to empty into the Atlantic and the other into the Pacific.

NOTE.—Mr. Lane, civil engineer, suggested that it might be desirable instead of forming jettées at the caños of the Atrato, to make a cut from the Coquito to deep water in the harbor, and to put guard gates, so that there might be no impediment from sedimentary deposits, the deposits taking the natural channel.

LAW AND LAWYERS.—BY THE EDITOR.

No. III.

CHARACTER OF THE LEGAL PROFESSION—THE CHANCELLORS AND JUDGES OF ENGLAND, ETC.

There is, however, a great and significant objection which is made to the legal character, and it has brought, in all ages, the darkest reproach. Let the lawyers escape from it as best they may, for we are unable to defend them longer; the ranks of the enemy are too strong and their numbers too formidable for this. They are accused of an indiscriminate defence of either side of a question, as they happen to be engaged, without any reference to the merits of the case. This custom has met with unmeasured denunciation, as we shall show by and by, from the mouths of sages in the law, moralists, philosophers, divines, whilst it has, at the same

time, been favored with distinguished apologists. In the offset, we might remark that there is nothing in the world of so pernicious a tendency in blunting and perverting all the powers of perception and of reason, independent of its immoral and irreligious character, as this promiscuous advocacy. "The habit of arguing," says Locke, (*Essays* 33,) "on either side, against our persuasions, dims the understanding and makes it lose by degrees the faculty of discerning clearly between truth and falsehood." A lamentable instance of this is furnished in the learned Chillingworth, alluded to by Upham,* in a quotation from Clarendon:

"Mr. Chillingworth had spent all his younger days in disputations, and had arrived at so great a mastery, that he was inferior to no man in these skirmishes; but he had, with his notable perfection in this exercise, contracted such an irresolution and habit of doubting, that, by degrees, he grew confident of nothing."

But when this debasing prostitution of mind is brought into the courts of justice, and there hired out to the highest bidder, and when the vilest cause in the world can engage a monopoly of it, well indeed may every friend of law and order tremble for the institutions and salvation of his country.

We are aware that some will meet us at this point with a stout denial of the evil influences, by telling us that the opposite sides are in equilibrio; that the forces neutralize each other; that talent, address, ingenuity—everything which can conduce to success—are in the hands of either party; so that, in the end, nothing can be lost by their employment. Now, let us ask, in calm deliberation, is not this converting the forum where justice and virtue ought to sit enthroned into an arena for angry contest, art, subterfuge, and chicanery? Is it not to leave the victory, and, of consequence, the administration of law itself, in the hands of him who has had the address to bring to his aid the greater amount of sophistry and craft, and can wield his deceptions with the greater impudence and the more barefaced and unblushing effrontery? Is it to this, then, that we have reduced the boasted perfection of our judicial forum? O dii immortales! ubinam gentium sumus? in qua urbe vivimus? quom rempublicam habemus? What! say the defenders of this indiscriminate advocacy, is it not in the face of our free and happy institutions that a man should be prohibited from pleading his own case, and saying anything in his defence that best pleases? And has he not a right to

* *Mental Phil.*, 2, 382.

say by another what he might say himself? Can there be anything of moral perversion in the lawyer who becomes the mere conduit pipe through which the court receives what his client has to allege? Is not the lawyer a mere part of the machinery of justice, without power to decline the functions of that part, viz.: the making known to the court what it would not be expedient for it to hear from the client, even if that client had the capacity, which is not to be supposed? Would there not, in too many cases, be a palpable defect of justice, if the plain and manifest right of the cause must appear, before counsel will undertake, for is it not often the case that in the course of the hearing, even after the trial is at an end—nay, after execution is awarded—something turns up which gives an entirely new phasis to the question and chases away all the clouds, doubts, and darkness, which overshadowed the minds of those who had prejudged it? Did not the pure and pious Hale see fit to change the course which had characterized his earlier efforts at the bar, on discovering how often his first prejudices were dissipated by a nearer view of the case?* If lawyers, distinguished for integrity and spirit, were accustomed to make this discrimination, would it not throw an extensive amount of business into the hands of the dissolute, of which the profession shall never be in want? At the worst, is not truth and justice sifted out in the course of the various and conflicting allegations and pleadings, whatever may be intended by the parties, and could they be so well sifted out under any other system of practice? All of these, and a hundred other questions may be propounded, wherein plausibility disguises sophistry and wins its way to the hearts of incautious or interested reasoners. The answers could easily be made in detail, and the reader, if his understanding be trained up to right principles, will make them for us. All attempts to mystify so evident a matter must prove abortive. A plain, honest mind could never hesitate a moment its decision in favor of that minority who hold that in no case, and under no circumstances whatsoever, can it be the duty of the lawyer to advocate other than right and justice. Such an advocacy has on its side all the sanctions of morality and religion; it is a pure, a noble, and an elevated one; it upholds the character of the profession; attaches it to the State; enlists, in defence of society, its warmest sympathies; calls into exercise all the highest faculties of its professors;

*Alas! that the incorruptible Sir Matthew should be introduced in support of a practice which his whole life condemns.

assimilates them to the great Hale, the beloved Hamilton,* the pure Grimke.†

But, that we may not appear unsupported in our opinions, we shall introduce into this place some of the arguments that have been alleged by the advocates of either side. We are indebted for many of them to Mr. O'Brien, and if much space be occupied by their introduction, let the reader remember that they belong to great authorities, and have the most direct bearing upon the subject before us. We make no other apology.

The name of one, deservedly high in the Christian church, though frequently the advocate of error, presents itself first:

I. Dr. Paley. There are falsehoods which are not lies, as a prisoner pleading not guilty, a servant denying his master, and an advocate asserting the justice, or his belief of the justice, of his client's cause.

II. Dr. Johnson. Sir, you do not know it (the cause) to be bad till the judge determines it. An argument which does not convince yourself may convince the judge to whom you urge it, and if it does convince him, why then, sir, you are wrong and he is right. Everybody knows you are paid for affecting warmth for your client.

III. Mr. Montague. None but the ignorant and unreflecting can think Bacon censurable for anything that he did as counsel for the crown, as no advocate can justifiably use any discretion as to the party for whom he appears.

IV. Bishop Warburton. I apprehend it to be the natural right of every member of society, whether accusing or accused, to speak freely for himself; and if this cannot be done in person, to have a proxy provided or allowed by the State, to do for him what he cannot or may not do for himself. I apprehend that every advocate is such a proxy.

V. Basil Montague. He (the barrister) exerts his power to strengthen his own case and weaken his opponent's; because he knows that, taking all things into consideration, justice is best promoted by collision of intellect, and that the whole truth will be eviscerated by the opposite counsel, or that the intelligence which presides will not permit truth to be misrepresented by any partial examination.

VI. Lord Erskine. From the moment that any advocate can be permitted to say that he will or will not stand between the crown and a subject, arraigned in the court where he daily sits to practice—from that moment the liberties of England are at an end. If the advocate refuses to defend from what he may think of the charge or of the defence, he assumes the character of the judge; nay, he assumes it before the hour of judgment, and, in proportion to his rank or reputation, puts the heavy influence of perhaps a mistaken opinion into the scale against the accused, in whose favor the benevolent principles of English law makes all presumptions, and which commands the very judge to be his client.

VII. Benjamin D'Israeli. I confess I have imbibed an opinion that it is the duty a counsel owes his client to adjust him by all possible means, just or unjust, and even to commit a crime, for his assistance or extrication.

VIII. Lord Brougham. An advocate, by the sacred duty of his connexion with his client, knows, in the discharge of that office, but one person in the world—that client, and no other. To save that client by all expedient means, to protect that client at all hazards and cost to others, and, among others, to himself, is the highest and most unquestioned of his duties; and he must not regard the alarm, the suffering, the torment, the destruction, which he may

* On being asked by a young lawyer the best road to eminence at the bar, Hamilton replied, "Be ever found upon the right side."

† The name of Grimke must ever be venerated, associated as it is with all the highest qualities of human nature. We know his faults and forget them.

bring upon others; nay, separating even the duties of a patriot from those of an advocate, he must go on, reckless of the consequences, if his fate should unhappily be to involve his country in confusion, for his client.

These, then, are the authorities upon which the affirmative of the question rely, and strongly insist, with much of that confidence which results from the association of great names; but it must be remembered that "Great names can only give splendor to error, without being able to transform it into truth." However, the negative, in demanding to be heard, brings with it an array of names, not wanting in any of the elements of true greatness, as will directly be seen—divines, moralists, casuists, lawyers, legislators. *Audi alteram partem.*

I. Bishop Sanderson. Let it be a ruled case to thee, in all thy pleadings, not to speak in any cause to wrest judgment.

II. Hooker. If they who employ their labor, and travel about the public administration of justice, follow it only as a trade, not being persuaded in heart that justice is God's own verdict, and themselves his agents in this business, formalities of justice do but serve to smother right; and that which was necessarily obtained for the common good is made the cause of common misery.

III. Baxter. It is a dear-bought fee which is got by such a wilful, aggravated sin as the deliberate pleading for iniquity or opposing of the truth.

IV. Fuller. He (the advocate) joys not to be retained in such a suit, where all the right in question is but a drop, blown up with malice to be a bubble.

V. Thomas Aquinas. Now, the advocate clearly counsels and assists him whose cause he undertakes, and if he knowingly undertakes an unjust cause, is without doubt guilty of heinous sin, and is bound to make restitution to the party who, by his assistance, has been unjustly injured.

VI. Grotius. *Qui sancta sumis arma civilis togæ cui se reorum capita, fortuna, decus intenda credunt, nomini præsta fidem juris sacerdos: ipse die causam tibi litemque durus arbiter præjudica voto clientum jura metiri time, nec quod colorem patitur, id justum puta. Peccet necesse est sæpe, qui nunquam negat.*

VII. St. Germain. He may give no counsel against the law of God or the law of reason; that a man should do as he would be done by is grounded upon both these laws.

VIII. Sir Matthew Hale. It is as great dishonor as a man is capable of, that for a little money he is to be hired to say or do otherwise than as he thinks.

IX. Sir John Davies. Good lawyers have not with us that liberty which good physicians have, for a good physician may lawfully undertake the cure of a foul and desperate disease, but a good lawyer cannot honestly undertake the defence of a foul and desperate cause.

X. Domat. All the duties of advocates may be reduced to two maxims: one, never to defend a cause that is unjust; and the other, not to defend just causes but by the ways of justice and truth.

XI. Lord Langdale. The zeal and the arguments of every counsel, knowing what is due to himself and his honorable profession, are qualified by considerations affecting the general interests of justice.

But why go on multiplying the authorities, which are sufficiently numerous, when we might well conclude that none at all are necessary. Is not the rule we advocate sustained by the immutable principles of right, as well as the civil institutions of many centuries? The Roman advocate was sworn never to defend a cause known to be unjust. A similar oath was administered to the Scotch; and in Holland

the advocate is so sworn even at the present day. The earlier English statutes were to the same point.

The catalogue of eminent lawyers affords frequent illustration of the fact that no position in society, however low and humble, can throw a barrier in the way of those who aspire to be great. Some of the brightest characters that have ever adorned the profession set out in life under circumstances the most discouraging, and worked their way upwards, at last, to the highest elevations, by the most untiring assiduities and labor. In the law there is no mushroom growth: the lawyer "is made," whatever be said of the poet, and the elaboration is one of highest effort. In his earlier prospects, everything is frequently dark and cheerless, and the most inglorious obscurity seems, for a long time, to threaten the talent and learning which need only an occasion for brilliant display. Frequently has it been the result of mere accident that the lawyer is brought into notice, and then the clouds begin gradually to be dissipated. Perhaps, it may be, the very difficulties with which, at first, he has had to contend, and the conflicts in his own bosom occasioned by them, have called into exercise and developed the loftiest energies of soul, and fitted, when the time should come, for the noblest achievements in the profession. Adversity, after all, is the school in which to educate men for greatness: it sharpens all their powers, it develops all their resources, it makes them great in their very struggles to exist. Who, that is at all acquainted with biography, needs yet to be informed of this? "Pray, my lord, what do you think my son had better do to succeed in the law?" "Let him spend all his money, marry a rich wife, spend all hers, and when he has not got a shilling in the world, let him attack the law." Such was Lord Kenyon's advice. Erskine used to say, that "when he was about giving up in despair at the bar, he felt his little children in imagination tugging at the skirts of his gown." And our own Patrick Henry doubtless discovered the potency of a combination of wife, children, and grim poverty. It might not be uninteresting to mention a few great ones who passed at first many a dreary year at the bar, without being harrassed with any of those unseasonable interruptions of which Horace makes his advocate complain:

*Agricolam laudat juris legumque peritus
Sub galli cantum consultor ubi ostia pulsat.**

Sir Fletcher Norton, and Mr. Bearcroft, who became chief justice of Chester, almost starved during the first years of their professional career. Lord Kenyon, entitled Holyrod,

* Sat. I., 9, 10. In Avaros.

(who afterwards became justice of the king's bench,) a rising young man, in his forty-seventh year! Chief Justice Saunders was a beggar boy, if not a parish foundling. Sir Francis Pemberton was thrown into jail for debt, and there studied law. Sir Henry Martin, admiralty judge, used jocularly to say, that had his father left him fourscore instead of forty pounds per annum, he would never have plied his book for a livelihood. Lord Mansfield was, at first, in very bad circumstances, and owed his introduction into business to the accident of his senior counsel having a fit in court, which threw the whole management of the case upon his shoulders; business then poured in, so that he never knew, as he said, the difference between an income of almost nothing and one of many thousand pounds. Somers, Cowper, Talbird, Yorke, and Camden, overcame a thousand obstacles—

"Sped their bright way to glory's chair,
And worthily filled it."

Lord Kenyon for a long time struggled with many an adverse fortune. The companions with whom he associated himself at this period were Dunning and Horne Tooke. In vacation they dined together. "As to Dunning and myself," Tooke used afterwards to say, "we were generous, for we gave the girl who waited a penny apiece, but Kenyon rewarded her with a half-penny or a promise."

Lord Chancellor Thurlow, who, although great in many respects, was withal no amiable character, was accustomed in after life to boast of his humble original. "In the county of Suffolk there were two families of the same name; from the one sprung Thurlow the statesman, from the other Thurlow the carrier; I am descended from the last." When reproached by the Duke of Grafton with this plebeian extraction, his retort involved the duke and his friends in the greatest confusion, and is at this day universally admired: "I can say, and will say, that, as a peer of parliament, as speaker of this right honorable house, as keeper of the great seal, as guardian of his majesty's conscience, as lord high chancellor of England, nay, even in that character alone in which the noble duke would think it an affront to be considered, as a MAN, I am at this moment as respectable, I beg leave to add, I am at this time as much respected, as the proudest peer I now look down upon."

The accidental visit of an old nobleman to his native village, and disposition to be entertained with a few hours social intercourse, first introduced Dunning to the law. For the first three years his fees did not reach in all 100 guineas;

the fourth brought him £1,000; and the average afterwards was from 8 to £10,000. He left a fortune at his death of £150,000.

Mr. Scott (Lord Eldon, eloped at an early age with a young lady, and not a little straitened himself in a pecuniary way. The produce of his first two years' practice was by no means encouraging—a single half guinea, which he generously presented to his wife for pocket money.

The list could be extended to considerable length were we to introduce the many remarkable instances of the same kind to be found in our country.

The incorruptible integrity of the English bench has furnished a perpetual theme for admiration and highest eulogy, and certain it is that no class of men in the world have ever exhibited more purity, integrity, and learning—more uniform devotion to truth and justice—more passionate devotion to country—more of the highest and noblest attributes of human nature—than the English judges. Seldom have there existed, for several hundred years, any exceptions to this bright and glorious pre-eminence, and the heritage which has been left by these elevated characters must forever be prized by their countrymen. Well may every lawyer look up with veneration to these shining examples of unsullied glory and distinction, emulate their virtues, catch from them an inspiration of soul which incites to noble and generous effort—an enthusiasm which soars upward to the sky.

If we consider the chancellors, from the earliest periods down almost to the present day, what confirmation have we of these views—how few the exceptions! Can any one conceive the time unprofitably employed which traces out their history?

Sir Thomas More—the friend of Erasmus—*vir doctrina et probitate spectabilis!* Who does not admire the memory of More! An epigram of the times has celebrated the capacity and dispatch which characterized his administration:

“When More some years had chancellor been,
No *more* suits did remain;
The same shall never *wore* be seen
Till More come back again.”

Ellesmere—the great name which was brought into conflict with Coke's, during much of that long and bitter conflict which was carried on between the courts of law and chancery.

Francis Bacon, Lord Verulam, whose legal abilities, however great they may have been, were so far eclipsed by his

extraordinary genius and wonderful achievements in literature and science, that he is considered the father of everything noble in philosophy. The lawyer yields to the philosopher; but the lawyer existed and had been great, were it not for the contrast. It is a grand mistake which detracts from the legal knowledge of Bacon, and one that men are prone to make, as we have seen in our own day.* Queen Elizabeth fell into it when she remarked that "Bacon had a great wit and much learning, but that in the law he could show to the uttermost of his knowledge, and was not deep." Even upon this sun may there be found spots dark enough—too dark to give us any pleasure in contemplating them.

John Williams. Before the time of More the chancery had been occupied by ecclesiastics. On the malversation of Bacon the original order was restored, and the great seal entrusted to Williams, who, though little informed in legal matters, made in the result no indifferent chancellor; his diligence and application were untiring, and his integrity and honor beyond all suspicion. The following anecdote happily illustrates the latter. On one occasion, being told that a certain individual, who had a suit in chancery, was famous for building churches, the lord keeper remarked, "And the same shall not fare the worse for building of churches." The gentleman, hearing of this observation, sent him forthwith a present from his orchard and poultry yard. "Nay, carry them back, George," said the keeper, "and tell your friend he shall not fare the better for sending of presents."

Lord Coventry, of whom little is recorded.

Lord Commissioner Whitlock. His character was too much tinged by the stormy politics of the times, and his own officious participation in them, to entitle him to many high laudits.

Clarendon. A name justly celebrated, and the author of the immortal "History of the Rebellion."

Earl of Nottingham. The Duke of Wharton draws his portrait with a bold hand, and succeeding ages have borne testimony to the justness of its delineations. "I would seat him on his throne, with a ray of glory about his head, his ermine without spot or blemish, his balance in his right hand, mercy on his left, splendor and brightness at his feet, and his tongue dispensing truth, goodness, virtue, and justice to mankind." He is represented by Blackstone,

* The late lamented Legaré suffered in this respect. Men could not believe that he who had exhausted so many fields of learning, and attained to such elegant scholarship, was at the same time an eminent jurist; but the egregious mistake was corrected in that eloquent tribute which emanated from the walls of Harvard College.

Story, and others, as the father of the present system of chancery.

Francis, Lord Guilford. As a jurist we do not hear him spoken of in terms of very high admiration. His life is written to our hands by that original and eccentric brother of his, Roger North; and Mr. Roscoe says of the production, that "there does not exist in the English literature a more singular and characteristic piece of biography. The stores of anecdote, the indescribable *naïveté* of the style, confer a peculiarly interesting character upon the book."

George, Lord Jeffries. Happy, could such a name be blotted out forever from the memory of men! But there it stands, and there it will remain, in all its blackness and deformity. Truth compels its insertion here; and, if it afford no pleasure, nor call up one agreeable emotion, something of instruction may at least be derived. To the glory of the bar be it spoken that Jeffries was never educated a lawyer—his iniquity and craft worked him into notice, and we find him sold, at an early period, to a tyrannical prince, the fit instrument of his every enormity. James himself, in his better moments, could not but start back with horror as his favorite so far outstripped him in the career of guilt. In the State trials for treason, when chief justice of the king's bench, all the black malignity of his nature was displayed, his levity, his haste, his disregard of all law and reason, his perversion of evidence, his zeal to condemn at all events, even unheard, his wicked delight in swelling the trophies of the "Western Campaign," as he entitled his circuit after the insurrection of Monmouth; these are the melancholy evidences afforded us of what the worst passions of human nature are capable when roused into action. Burke says that "his crimes have caused his memory to stink in the nostrils of all succeeding ages." Burnet that "he was scandalously vicious, and was drunk every day, besides a drunkenness of fury in his temper that looked like enthusiasm." We must refer to the State Trials to know the rest, particularly Lord Russel's, Mrs. Lises, the venerable Baxter, and Algernon Sidney. He addressed Baxter from his judicial seat, "Richard, thou art an old fellow and old knave, and thou hast written books enough to load a cart; but, by the grace of Almighty God, I will crush you." This career of guilt was not destined to impunity. On the approach of the Prince of Orange, everywhere were heard the cries of vengeance! justice! justice! and the miserable wretch, in his vain endeavor to escape, was arrested and thrown into the Tower, where he died of the wounds received at the hands of an incensed populace.

Lord Somers. The delineation of his character, by Horace Walpole, is strikingly grand and elevated. "He was one of those divine men who, like a chapel in a palace, remain unprofaned, while all the rest is tyranny, corruption, and folly." To which Garth accedes,

"Somers doth sickening equity restore,
And helpless orphans now need weep no more.

Hardwicke. For twenty years this light of jurisprudence shed its broad beams upon the courts. Judge Story celebrates his administration: "This great judge presided in the court of chancery during the period of twenty years; and his numerous decisions evince the most thorough learning, the most exquisite skill, and the most elegant juridical analysis. There reigns throughout all of them a spirit of conscientious and discriminating equity, a sound and enlightened judgment, as rare as it is persuasive, and a power of illustration from analogous topics of the law as copious as it is exact and edifying. Few judges have left behind them a reputation more bright and enduring; few have had so favorable an opportunity of conferring lasting benefits upon the jurisprudence of their country; and still fewer have improved it by so large, so various, and important contributions." If he had a conspicuous fault, it was avarice, of which many ludicrous anecdotes are related.*

Northington, so famed for eccentricity. Camden, the noble advocate of liberty, the incorruptible, hardy, and zealous opponent of "general warrants," the friend of America. Bathurst, the jolly old lord, and honest Loughborough, bring us down to the times of—

Lord Erskine. One of the most remarkable characters that England ever produced. A great wit, a profound lawyer, an eloquent man, a statesman, there was no sphere in which he did not shine with surprising lustre. Called to preside over the chancery, from a practice confined exclusively to the courts of common law, his great genius was not wanting to itself. The following tribute from an eminent contemporary will evidence this: "His character exalts the character of the English barrister beyond what it had in former times attained, and holds out an illustrious instance of patriotism and independence, united with the highest legal eminence, and crowned, in the worst times, with the most ample success." His speeches are exemplars of excellence, and merit at all hands the most careful study. Mr. Roscoe has perhaps exhibited higher evidences of his

* For sketches of Lord Hardwicke, Lord Camden, Lord Thurlow, Lord Roslyn, Sir William Grant, &c., consult Mr. Charles Butler's *Reminiscences*.

own skill in drawing this character than in drawing any other in his volumes.

Eldon. He presided in chancery until 1827. His conspicuous defect was tardiness and delay, which, however, grew out of an over anxiety to be just; business, to a vast amount, in consequence, accumulated upon his hands, much of which was of twenty years standing; he would never be content with what the advocates told him, but must needs give the most untiring study to all the particulars of every case before him. On being reproached with this, "Had I given judgment," said he, "on such statements and information only as I have received from counsel on both sides, I should have disposed of numerous estates to persons who have no more title to them than I have, and I feel a comfort in that thought, a comfort which all the observations on my conduct can never rob me of."

Let us now pass over to the law courts, and hurriedly call to memory some of those by whom they have been distinguished. We begin where the reign of Elizabeth terminates:

Sir Edward Coke. With this great man, who stands so pre-eminent among common lawyers, every one must be familiar. Whatever objections may be raised to his private character, and certain there are many, he was yet one of the most able, high-spirited, and independent judges that ever occupied the bench. The author of the *Institutes*, the *Reports* and *Commentary upon Lyttleton*, his memory cannot be otherwise than venerated, whilst his sturdy opposition to all the high-handed measures of the crown—proclamations, prohibitions, &c.—his bold and unflinching advocacy of liberty, at all hazards, and his devotion to free trade, must endear him to every true patriot. Unfortunately, when we turn from him as a judge, we no longer contemplate the same elevated character. When counsel for the crown, he was violent, overbearing, and even tyrannical, as was evidenced on the trial of Sir Walter Raleigh, and much of that nobleness which had characterized him on the bench seemed to depart, with all fortitude, when his independence lost him his seat. As a writer, his style is characterized by quaintness, pedantry, and conceit; he could even pride himself that in his *Institutes* were to be found three hundred quotations from Virgil. His derivations of law terms are sometimes so "far-fetched" as to provoke a smile, and there is so little skill in the distributions of the parts of his subject, such endless division and sub-division, so much subtlety and refinement, such an exuberance of Latin and Greek, brought

in, as it were, by main force, and withal so much ability and learning displayed, that one is at a loss what to think of the performance, whether to laugh or applaud. Of his contemporary, Bacon, he was no friend or admirer, and the lord chancellor's "expostulation," in which he endeavored to hold up Sir Edward's various faults, "as in a glass," for his inspection, will be remembered. It seems that Bacon once presented him with a copy of the *Novum Organum*, entitled *Instauratio Magna*, and bearing as a device a ship in full sail, upon which Coke wrote:

Edw. C. ex dono auctoris.
Auctori consilium.
Instaurare paras veterum documenta sophorum,
Instaura leges justitiamque prius.

And over the device:

"It deserveth not to be read in schools,
But to be freighted in the ship of fools."

Sir Matthew Hale. Never has the language of unmingled eulogium been more justly bestowed than upon this eminently great and good man. The purity of his private life, his piety, his love of justice, his accurate acquaintance with law, are displayed in every page of his biography. The friendship and confidence of Richard Baxter, which he enjoyed for a long course of years, the theological works composed and published by him, the plan of life which he laid out at an early period and adhered to, all confess the depth and fervor of his piety. We learn the character of his justice from the various anecdotes related of him, among others the anecdote of his paying, in court, for a present of venison, sent by a party interested, and returning a donation of sugar loaves. A disposition to side with the poor against the rich and powerful was his fault, and it once completely entrapped him. A courtier, having a cause to be tried, procured a person to go to the chief justice, as from the king, and speak in favor of his adversary. He gained his point, "for Sir Matthew could never think very well of any one that came so unduly recommended." The part which he took in the trial of witches has afforded grounds of exception to his character—but then the fashion of the times ought to be taken into consideration. The "Pleas of the Crown" are the great monument of his learning and ability.

Lord Thurlow. Although possessed of giant abilities, there is little in his character worthy of admiration. His meanness, vulgarity, and duplicity, have been severely handled. He rose from the lowest rank to the highest offices in the kingdom. As lord chancellor we have had occasion to mention him in another place.

Sir Samuel Romily. If it be no impiety to mention in the same breath the companion and friend of Howard, the advocate of freedom and humanity, the strenuous and unyielding reformer of the criminal code, the man of tenderest sensibility and affection, we cannot refrain from introducing him into this catalogue, although he was never raised to the bench. His life, letters, and diary, edited by his sons, have been lately presented to the American public.

Lord Mansfield. We have already had occasion to mention this name more than once, occupying, as it does, such an elevated niche in the temple of fame, and winning the glory of so many high achievements. He was the first English judge that understood, appreciated, and applied, the determinations of the civil law to the endless variety of cases arising in Westminster Hall. In this law he was profoundly versed, and perhaps the tincture which his mind received from some of its worst principles will account for that opposition to juries, and adherence to arbitrary crown measures, which drew down upon his head the denunciations of Junius. For popularity he professed an entire contempt, and displayed it in his trials of Wilkes,* in his opposition to the American Revolution, in his little friendship for Pitt and Camden, and reaped the full reward, in the conflagration of his splendid mansion, from the fury of a London mob.

Sir William Jones. We are not following the order of time. As a lawyer, his estimable work upon "Bailments," and his magnificent design of a "Digest of Hindu and Mahomedan Law," will sufficiently speak. As a judge, his administration in India gave universal satisfaction. But it is as a scholar, a linguist, a man of letters, that we are chiefly accustomed to speak of him; and certain it is, that few human beings have ever attained to such proficiency in the critical knowledge and understanding of so many and so great variety of languages. The following plan is by himself:

Resolved to learn no more *rudiments* of any kind, but to perfect myself in—

* There is much grandeur of sentiment in the following passage from his judgment in this case: "I wish popularity, but it is that popularity which follows—not that which is run after. I will not do that which my conscience tells me is wrong, upon this occasion, to gain the huzzas of thousands, or the daily praise of all the papers which come from the press. I will not avoid doing what I think is right, though it should draw on me the whole artillery of libels, all that falsehood and malice can invent, or the credulity of a deluded populace can swallow. I can say with a great magistrate, upon an occasion and under circumstances not unlike, 'Ego hoc animo, semper fui, ut invidiam virtute partam, gloriam, haud infamiam, putarem!'"

First: Twelve languages, as the means of acquiring accurate knowledge of

I. History.

1. Man.

2. Nature.

II. Arts.

1. Rhetoric.

2. Poetry.

3. Painting.

4. Music.

III. Sciences.

1. Law.

2. Mathematics.

3. Dialectics.

N. B. Every species of human knowledge may be reduced to one or other of these divisions. Even law belongs partly to the history of man, partly, as a science, to dialectics.

His acquaintance was critical with eight languages: English, Latin, French, Italian, Greek, Arabic, Persian, and Sanscrit. Eight were studied less perfectly: Spanish, Portuguese, Runic, German, Hebrew, Bengali, Hindu, and Turkish; and upon twelve others he had bestowed considerable attention: Tibetan, Pali, Phalari, Dieri, Russian, Syriac, Ethiopic, Coptic, Welsh, Swedish, Dutch, and Chinese.

Sir Michael Foster, author of the "Crown Law."

Sir John Holt, the upright judge and accomplished lawyer. In early life he gave himself up to every species of dissipation. When chief justice of England, he was called upon to try and condemn one of the boon companions of his youth. Visiting him in prison, to inquire after their quondam associates, "Ah! my lord," said the criminal, "they are all hanged except your lordship and myself." At the assizes, he tried an old woman accused of witchcraft, being possessed, as it was said, of a charm for curing, or disseminating, disease amongst cattle. The chief justice desired to see the redoubted charm, and to his amazement discovered that it was the identical scrip with which, on one of his wild excursions forty years before, he had deceived her. The old lady, it seemed, at that time had kept an inn; Holt was a guest, and, having squandered all his resources by dissipation, expected soon to be ejected. Having a ready invention, he saved himself. The landlady's daughter was affected with ague. Holt scribbled upon paper, and carefully bound it on her hand. By a happy coincidence, in a few days the disorder ceased; the old woman looked upon him as a kind of magician—would take no pay, of course, for anything he had had, but preserved the wonderful paper, with which she was said afterwards to have performed extraordinary works. The chief justice related the anecdote to the court, and the old wretch was at once acquitted.

Lord Kenyon. Though remarkable for a violent, petulant disposition, and extreme parsimony, he was at the same time most severe and rigid in the administration of justice. A hatred of vice, and an aversion to the least appearance of

profanity, was constitutional with him; and the utmost goodness of heart was ever evidenced in his conduct. Compelled to sentence a poor woman to death, whom he intended to recommend for mercy, she fainted as he began. "Good woman, good woman," exclaimed the judge, "I don't mean to hang you, I don't mean to hang you—will nobody tell her I don't mean to hang her?"

Sir Eardly Wilmot, whose modesty and love of retirement was so great that all, even the greatest office, was with difficulty forced upon him; he refused peremptorily to accept the great seal.

Mr. Justice Buller, Sir James Mansfield, Lords Ellenborough and Tenterden, names sufficiently high and venerated. The last words of Tenterden were characteristic, and exhibit the ruling passion strong in death—"Gentlemen of the jury, you are discharged." He then fell back upon his bed, and almost immediately expired. Nor can we omit mention of Gascoigne, who imprisoned the Prince of Wales for a contempt; of David Jenkins, who, in the discharge of his duty, being threatened with the Tower, nobly exclaimed, "I will go there with Magna Charta under one arm and the Bible under the other!"—of Selden and Blackstone,* the great *légál antiquarians*.†

In the time of Alfred the Great, it would appear that the corruption of judges was proverbial, for we are told that forty-four were tried and executed during the reign of that wise and politic prince. It is also said that, upon rigid investigation, the English Justinian, Edward, could find but two, of all his judges, free from the foulest stains—Johannes de Mettingham and Elias de Beckingham. He fined and banished Sir Thomas Wayland and Sir Ralph Hengham, executed Thorpe and de Stratton, chiefs of the king's bench and exchequer. But these were barbarous times, and when we have mentioned a Scroggs, a Macklesfield, and that abominable monster Jefferies, all of more modern date, the black catalogue will be finished. At the bar, Epsom and Dudley, the iniquitous and corrupt minions of Henry VII., stand almost alone in the naked deformity of their characters. Since the passage of the act 12 William III., which

* Junius says, if you wish to know what justice is, you may go to Sir William's book; but to know what injustice is, you must become acquainted with the learned judge himself. Horne Tooke thought the Commentaries "a good gentleman's law book, clear, but not deep."

† We had intended a sketch of some of the great lawyers of our own country—the Marshalls, Kents, Storys, etc.—but the length of the present article is already too great. At a future day we may devote a few pages to the subject. The Carolina bar, in particular, affords a rich fund of anecdote, within our immediate reach.

changed the judicial tenure from *durante bene placito* into *de bene gesserint*, the most powerful inducements to evil have been removed, and the judges now, in the independence of their character, have as little to fear from the arbitrary requisitions of the government as they have from the rash and inconsiderate menaces of the populace.* Perhaps we cannot better conclude this division of our subject than with the words of Chancellor Kent: "Every person well acquainted with the contents of the English reports, must have been struck with the unbending and lofty morals with which the courts were inspired. If we were to go back to the iron times of the Tudors, and follow judicial history down, we should find the higher courts of civil judicature generally, and with rare exceptions, presenting the image of the sanctity of a temple, where truth and justice seem to be enthroned and personified in their decrees."

SOUTH CAROLINA—HER AGRICULTURE, ETC.

The following was prepared by a gentleman of South Carolina, for the Carolinian. It is an able and valuable essay. The editor of the Review, to whom reference is made as the person who prepared the Census Compendium, can only say, that had all the tables which were desirable been included in that work, it would have reached some two thousand pages, instead of the four hundred to which it was limited by act of Congress. The material was not deficient.

If the actual condition of the agriculture and productive industry of the State of South Carolina be a subject of interest to her people, it scarcely needs any apology for presenting the following table, intended to combine in one general statement, more fully than has hitherto been done, all the most important elements in relation to population, capital, and production, so as to present a comparative view of these between the different districts of the State. The Compendium of the United States Census, lately published by order of Congress, has done much towards furnishing materials for this purpose; but among all the elaborate tables set forth in this work there is not one which combines, in a single view, all the most material facts in relation to the matters above mentioned; while many important comparative views of great interest, and many facts and results important to be known,

* From the following list, it will appear that the boasted independence of the judges is not altogether attained in this country. In Maine, New Hampshire, and Connecticut, they hold their seats during good behavior, or until seventy years of age; Missouri, sixty-five, and perhaps South Carolina soon; New York, sixty; Tennessee, they hold eight or twelve years; New Jersey, Ohio, Michigan, and Indiana, seven years; Alabama and Mississippi, six years; Georgia, three years; Vermont and Rhode Island, annually elected!

are entirely omitted. This may be accounted for, in part, from the schedules ordered by Congress being incomplete, and insufficient to meet all the subjects of inquiry interesting to the people of each State, separately considered; and from the great additional time and labor—probably beyond what were at the command of the census bureau, to construct complete tables of all these matters, for each State of the Union.

The first prominent defect in the schedules was, that there were no instructions to procure an estimate of the value, in detail, of the various agricultural productions of each State. This might have been done, perhaps more satisfactorily, by competent persons in the proper office at Washington; and while we find in the census a table exhibiting an estimate of the aggregate value of each agricultural production in all the States, it is to be regretted that a column showing the value in each district had not been added. This is the only shape in which estimates of value are really useful. Every person desiring such information is left to reach it by his own estimates, at great expense of time and labor. Another great defect was, that there was no information collected as to the actual quantity of land cultivated in the crops of each kind of agricultural produce, particularly of the main and leading objects of culture. No estimate can arrive at a reasonable approximation to the truth in this particular, and thus placing it beyond the reach of any one to institute comparative views in relation to fertility of soil or improvements in tillage. Neither is there anything to show the advance of population in the different districts of the State, beyond a single decade, by which we can ascertain the comparative increase for longer periods of time, and note the changes in the comparative condition of the districts in such additional periods of time. Not only is there no table to show the value of the productive industry of the different States and districts, in the aggregate, or *per capita*, but nothing to throw any light upon the profits of agriculture, in the compound ratio of labor and land. These, with many other objects of inquiry, it is to be hoped, will command the attention of Congress and the legislature of the State, so as to enable those who may be hereafter entrusted with the duty of collecting and preparing tables for general use to perform it in a satisfactory manner.

In a State whose interests and resources are peculiarly and almost exclusively agricultural, it is strange that no effort has been made by its legislature to establish a statistical bureau of its own, even in relation to this one great leading

interest. In this way a vast fund of information of the utmost importance to the welfare of the State, might be collected at no great expense by a moderate additional compensation to a portion of her public servants necessarily employed in other departments of public duty. By fixing the time half way between the United States census decades, we would realize the benefit of a census every five years. The collection of valuable statistical facts and information, and classifying, combining, and arranging them in tables so constructed as to exhibit results for a given number of years, or series of years, is an object of the utmost importance to every State, and not overlooked or neglected by enlightened States in any part of the world.

Hitherto we have been obliged to remain ignorant of the value of our productive industry ; and, instead of regarding this as the true exponent of our wealth, power, and resources—as the measure of our prosperity, of our advance in civilization, of our means of defence and security—we appear to measure the wealth of the State only by the number of negroes which our citizens return in their tax lists, and the number of acres of land embraced in the broomsedge and pine-thicket baronies, which everywhere salute the eye of the traveller. While really behind nearly all the States of our confederacy, as respects the prosperous condition of our agriculture, we seemed satisfied to remain in ignorance of its general results as a source of income, and to imagine its condition as amongst the most flourishing. Our census tables show an advance in our population of only twelve per cent. in the last decade, while some of our districts, formerly among the most fertile and prosperous, have made no advance in the same time, and some others none in the last half century. While much the largest portion of the natural increase is annually disappearing to swell the tide of emigration to new States, we have not yet to begin an inquiry into the cause. In that great staple of subsistence, Indian corn, we have sunk to the low average of eleven bushels per acre ; while other longer settled States, with a naturally less fertile soil, have arisen to an average of from thirty to forty bushels per acre. These are striking facts, which demand reflection among those whose opinions and authority control the destinies of the State.

With the view of supplying these defects in the State census, and of combining in one view a fuller and more satisfactory comparative statement of our advance in population, production, and wealth, the compiler of the present

table hopes he may be excused for this his humble attempt to aid in the accomplishment of this desirable purpose.

In order to present these views in the most acceptable and satisfactory way, it has been thought best to divide the State for this purpose into four geographical sections, corresponding to the geological character of its soil and surface, and distinguishable to a certain extent by a difference in the crops cultivated, and in some measure by the system of culture.

1. The section comprising the districts bordering on the sea-coast, or reached in some parts of them by tide water, and producing mostly rice and long staple cotton as a market crop. 2. The alluvial districts of the middle country lying between the districts on the coast and the falls of the rivers, producing almost exclusively provisions, and, for a market crop, short staple cotton. 3. The districts of the upper country, so called, lying between the falls of the rivers and the mountain range of districts, producing mostly the same crops as the second section, with a larger amount of small grain. 4. The districts composing the mountain range, not so well adapted to the culture of cotton as the two last-named sections, but capable of producing in abundance corn, wheat, oats, and other grain, with tobacco.

It will be perceived that the 2d, 7th, 8th, 9th, and 11th columns of the table have been copied from the Compendium of the United States Census, and have furnished the basis of all the calculations in the other columns of the table, except the valuations in the 14th and 15th columns, from which and from the 11th column, the compound ratios of the 16th or last column have been made up. With respect to the estimates of value—the part of the table involving the most labor and difficulty—it is proper that some explanation should be given. With the exception of a few leading articles constituting the largest amounts, the value has been estimated at the average prices which ruled in some of our largest commercial cities at the close of the year 1850, and the first of the year following. If lower rates prevailed in some instances in the interior, the difference was mainly made up of the cost of transportation to market; and as this was mostly earned by the teams of the producers themselves, or the railroads running through the different sections, it was conceived that this mode of estimating the value was less liable to objection than any other deemed practicable. But as respects the leading articles above alluded to, it was believed that it would be generally more satisfactory, and obtain fairer results, to assume an average price, based on those prevailing from three to five years before and after the month of June, 1850

Accordingly, an uniform rate of valuation for these commodities has been adopted as follows: Indian corn, 75 cents per bushel; wheat, \$1 25 per bushel; cotton, 9 cents per pound, average; tobacco, 7 cents per pound, average; rice in the rough, (being returned in this way,) 2½ cents per pound; oats, 50 cents per bushel; hay, \$15 per ton; potatoes, sweet, 25 cents per bushel. These prices have been adopted, also, as presenting fair relative rates of value; and it is confidently believed that no scale of prices, though varying considerably from these rates, would have materially varied the comparative results, provided the relative value had been preserved with equal fairness.

The number of square miles in the different districts or States in the first column have been calculated from the number of acres of land returned in each district; and due allowance being made for the space occupied by rivers, bays, and other bodies of water not included in land measurement, there will be found a sufficient approximation to the estimate which is deduced from measuring the surface of the map. The ratio of increase for the last half century, as made up in the sixth column, includes only those districts which were organized previous to 1800; while those marked with an asterisk in the same column were subsequently organized, and show the ratio of increase only for the last forty years, or from 1810.

The statement of productive industry, *per capita*, in the compound ratio of labor and land, as set forth in the last column—containing results of the highest interest of any in the table—have been deduced by assuming that the capital absorbed in lands, improvements, and implements, is equal to one-half of the actual capital, in farm, plantation, or other labor, however employed; or, in other words, that it forms one-third of the entire agricultural capital. Though this may possibly be somewhat above the real average, it is believed to be nearer the truth than any other ratio that can be conveniently employed. This estimate of capital in labor has been computed, first, by taking one-half the number of the slave and other colored population, and deducting therefrom ten per cent. for those engaged in employments not represented—making in round numbers 170,000 effective laborers; and in like manner, by taking one-half the number of the white population, and deducting therefrom twenty per cent. for those engaged in employments, or professions, not represented, or in no productive employment, and computed, however employed, to be equivalent to 110,000 effective laborers. These together, making 280,000, are again com-

puted as equivalent to or representing the capital employed in that number of average field hands, estimated at an average value of \$650 each. Thus, according to this computation, we have a capital of about \$182,000,000 in labor, and of about \$87,000,000 in lands, improvements, and implements, exclusive of real estate in cities, towns, and villages, as set forth in the table.

It is not presumed that the results in the above computations, or, indeed, in any part of the following table, are to be received as rigorously correct, nor is such accuracy ever possible in statistical results. All that can be expected is an approximation to what is sought. To expect absolute truth would be unreasonable, and those insisting on it would soon find it necessary to abandon their research as impracticable. It is sufficient for all useful purposes, if we can arrive at an approximation to the truth; and we may, at the same time, console ourselves with the absolute certainty that these approximations are much nearer the real truth than is generally imagined. This could be easily demonstrated and verified in a vast majority of the cases.

Comparative view of the population, landed capital, and productive industry of South Carolina, 1790-1850.

Districts	Sq. miles.	Aggregate pop. 1850.	Per square mile.	Per centage slave.	Ratio of free 1840 to 1850.	Ratio of free 1790 to 1850.	No. farms.	Acres of improved land.	Acres of unimproved land.	Average acres to farm.	Val. lands, implements and improvements.	Ave. value of lands per acre.	Val. landed capital per head.	Total value of products.	Amount per head, white and slave.	Amper head in ratio of labor and land.
Anderson.....	720	21,475	29	85.00	16.44	91.87	1986	178,435	298,498	287,087	\$2,559,485	\$5.85	\$119	\$1,699,256	\$79.12	692.44
Pickens.....	887	16,904	18	81.76	17.74	93.23	1281	98,306	474,756	461	1,708,698	8.00	101	907,080	88.68	85.96
Greenville.....	878	20,156	23	88.19	18.51	75.37	1088	180,727	298,780	847	2,102,385	9.67	104	1,007,487	50.08	84.02
Spartanburg.....	848	26,400	30	80.41	11.54	117.85	1553	307,666	854,281	861	2,792,886	9.71	106	1,472,848	55.80	59.20
York.....	692	19,493	28	41.20	37.21	89.69	1293	188,506	288,994	862	2,795,898	6.70	144	1,268,710	63.65	64.29
Average.....	.....	.....	25	82.81	11.00	98.51	.....	148,780	327,087	849	.....	5.18	115	.....	60.75	68.60
Abbeville.....	996	82,818	83	69.60	18.92	138.46	1814	912,628	425,081	831	5,006,010	7.86	154	2,019,020	82.60	59.76
Cherokee.....	925	18,088	24	84.25	1.09	120.88	844	192,801	138,188	898	7,171,782	9.44	176	1,441,727	79.82	71.81
Edgefield.....	1486	89,262	60	81.88	19.51	116.59	2080	968,879	688,042	408	6,654,088	9.94	144	2,867,068	74.62	73.33
Fairfield.....	1560	21,464	14	94.07	6.14	112.19	616	121,688	287,269	632	3,289,088	9.17	168	1,889,160	68.60	96.89
Lancaster.....	448	30,888	69	48.68	10.81	82.76	880	100,788	186,887	618	1,868,576	9.27	148	814,688	74.15	73.80
Laurens.....	727	28,407	39	51.08	6.91	82.74	1608	182,628	282,867	280	4,090,699	6.72	150	2,018,421	89.00	89.86
Newberry.....	551	20,145	37	68.99	9.71	112.00	1048	182,922	169,768	688	3,708,458	10.60	188	1,682,161	84.50	74.90
Union.....	622	19,882	32	82.84	4.29	98.92	869	162,787	286,868	438	3,161,666	7.94	189	1,460,869	74.50	69.47
Average.....	.....	.....	31	56.28	9.98	107.38	.....	177,424	297,804	418	.....	6.10	157	.....	74.26	70.28
Barrow.....	1504	96,608	15	69.28	28.09	240.78	1573	107,476	937,888	741	9,877,749	2.48	108	1,480,461	57.14	61.07
Charter.....	400	10,790	27	86.00	26.76	298.85	848	82,511	241,817	786	9,687,477	8.07	84	1,851,818	88.00	80.85
Darlington.....	1087	14,880	14	89.66	17.51	248.62	887	182,168	540,484	769	9,688,880	4.93	174	1,169,447	69.07	63.65
Kershaw.....	650	14,478	22	64.11	17.21	67.04	888	48,102	904,960	685	1,438,898	4.63	99	777,986	88.73	88.64
Lexington.....	807	12,880	16	49.19	6.77	82.08	897	71,792	487,841	407	1,078,618	6.81	81	688,947	67.09	64.80
Marlboro.....	483	16,789	35	61.90	28.31	117.98	691	85,988	904,808	487	1,087,618	6.45	184	848,662	78.47	69.27
Orangeburg.....	1490	38,182	26	65.28	27.80	40.89	1904	181,808	798,681	758	2,176,618	6.47	184	1,188,929	89.41	88.68
Richland.....	698	20,248	29	80.84	28.48	138.50	1848	82,498	985,681	699	2,176,618	6.47	184	1,077,888	88.23	82.07
Sumter.....	1872	88,880	24	70.00	19.48	188.62	1848	226,274	681,988	684	8,148,068	4.24	118	1,787,989	84.19	87.91
Average.....	.....	.....	28	67.14	20.88	180.68	.....	180,852	477,687	678	.....	4.12	188	.....	88.87	80.10
Beaufort.....	1448	88,805	28	86.19	8.48	69.86	849	289,289	687,469	1302	8,801,850	7.00	144	2,607,687	67.17	65.87
Charleston.....	1981	40,889	88	87.55	1.48	10.46	682	188,286	694,486	1002	5,803,290	6.30	144	89,160,847	49.08	38.26
Average.....	.....	.....	42	82.81	11.00	98.51	.....	148,780	327,087	849	.....	5.18	115	.....	60.75	68.60
Colleton.....	1178	28,466	24	75.06	11.42	14.80	888	181,475	688,488	849	8,827,881	4.81	187	1,861,281	65.88	66.84
Georgetown.....	674	30,647	86	89.22	18.98	20.60	880	49,609	318,514	608	5,704,290	15.49	276	1,410,880	68.87	48.11
Hampton.....	792	7,646	10	37.18	38.84	478.51	681	88,664	478,871	608	8,888,480	6.48	84	488,088	66.48	63.87
Marion.....	1818	17,407	14	48.20	24.98	93.80	1874	124,806	682,849	667	2,680,540	8.48	184	976,808	58.08	54.86
Williamsburg.....	784	12,447	15	88.88	20.88	86.16	484	70,880	482,440	1105	861,688	1.12	60	478,708	88.66	44.79
Average.....	.....	.....	28	67.47	16.09	72.00	.....	117,419	647,889	684	.....	6.77	168	.....	82.88	80.28

* Not separately organized till 1810. Increase for last 40 years. † The city of Charleston. ‡ Including Columbia. § Including city. ¶ Charleston and Columbia not included.

From the general view of the present actual condition of the agricultural interest of South Carolina, we may safely assume that the greatest density of population will always be found on those lands naturally the most fertile which are adapted to cultivation, and which can be occupied in health and safety until the limit of easiest adequate subsistence is passed. The ratio of increase in our population is controlled by the same efficient cause until after the above limit is reached, and then our population seems to seek, as we would naturally suppose, the next most fertile land available, until the same limit is again passed, and soon until all the openings are filled. The course of population in this State for the last half century fully illustrates this view, and will be made manifest by an examination of the fifth and sixth columns of the table. And though other counteracting and controlling causes might occur to change the natural course in an agricultural State, they have not yet arisen with us in any perceptible degree.

Under the existing state of our agriculture, our population, as respects density, would seem already to have nearly reached its maximum limits in those districts naturally the most fertile.

From these it now either seeks lands in other States, or in those districts containing cheaper and fresh or less exhausted lands, though naturally of inferior quality, until the population in these reaches the limit of adequate profit or subsistence, when it is probable it will be subjected to the influence of those natural checks existing in all our populous countries, or resort to other pursuits or enterprises to obtain adequate subsistence and profit. At the present time Charleston, Beaufort, Georgetown, Lexington, Sumter, Kershaw, Fairfield, Chester, and York would seem to have nearly or quite reached the above limit, and afford an illustration of the views here expressed.

The density of the slave population appears to have increased under joint influence of facility of access to a market, and the quantity of lands best adapted to the production of cotton and rice. Charleston, Georgetown, Colleton, Beaufort, Orangeburg, Sumter, Richland, Kershaw, Darlington, Fairfield, Newberry, Edgefield, and Abbeville furnish illustrations.

As regards lands, farms would appear generally to increase in size in the direct ratio of the preponderance of the slave population, when the comparison in this respect is made between the districts composing the same geographical range, noting, however, Marlboro', Newberry, and Abbeville as ex-

ceptions. Accordingly, from the mountains to the seaboard, the average size of farms increase in each successive range. As yet neither on the seaboard nor in the mountain range of districts can it be known from the returns whether the size of farms affect either favorably or unfavorably the amount of production in its general results; but in the upper and middle country range of districts, with the exception of Edgefield and Abbeville in the former, and Richland in the latter range, the districts with smaller average farms stand highest in the scale of production.

The proportion of improved to unimproved land regularly increases, as we would naturally conclude, in nearly the direct ratio of production in all the districts, when compared in sections of the same geographical range. The average amount of improved land per head, from the seaboard to the mountains, is as follows: 4.9, 6.4, 7.9, and 7 acres in each range respectively.

The value of lands or farms per acre, as estimated by the proprietors themselves, is highest in the upper country range, next in the range on the seacoast, third in the mountain range, and lastly in the middle country range.

South Carolina, being strictly an agricultural State, we might safely assume that production will always be found in proportion to fertility of soil, all other circumstances being the same, yet it is a remarkable fact that the value of production is not in proportion to the estimated value of the lands in any section of the State, as a general rule. Nor does the amount of the productive industry in any part of the State appear to depend mainly on the extent to which the staple commodities of rice and cotton are cultivated, nor does it appear to increase in proportion to the average amount of individual capital in labor and land employed, but rather found in an inverse ratio to most cases.

Under like circumstances, it would seem that in most parts of South Carolina grain and other provisions is a more profitable crop than cotton or rice, as now cultivated. Though it may be difficult to establish this position as strictly true, numerous comparisons, from the returns, appear to establish the conclusion as a fair one.

As regards the comparative value or efficiency of slave labor, it will be found that in the production of rice, as a market crop, it is the only description of labor hitherto found available; and here the superiority of the negro stands undisputed. That in the production of cotton, the quantity produced, as a general rule, is found greatest in those districts having the greatest preponderance of slave population;

but to this general rule there are exceptions in the largest cotton-growing districts—even where the comparison is limited to the same geographical range.

After a careful consideration of the facts which have been set forth in the table, several important general conclusions, in relation to the present and future prospects of the State, necessarily force themselves upon our attention. Among these are:

1. That the condition of our agriculture and other industrial pursuits, whether viewed singly in themselves, or in comparison with the same in other States of the Union, are not only discouraging, but exhibit generally a regular decline.

2. That as a natural consequence of this decline, the advance in our population for the last ten years has little exceeded one-third the average increase of the population of the United States in the same time.

3. That the fertility of our lands, as deduced from the amount of the crops produced in the most fertile districts, is undergoing generally a regular process of exhaustion; and that the market value of lands in most of the districts has not advanced in an equal ratio with that of the population in the last thirty years.

4. That the employment of slave labor in agriculture, or other industrial pursuits, is not as profitable as is generally supposed.

The length to which this communication has already been extended forbids an attempt to enlarge upon these conclusions; but a few general remarks may be indulged without incurring, it is hoped, a charge of unnecessary prolixity. The average value of the productive industry of the State does not exceed, as shown in the table, \$62 per head of the entire population, omitting the two cities, Charleston and Columbia. Full one-half or more of this amount is consumed on the plantation or farm as necessary means of subsistence, leaving about \$31 as the value of cotton and other marketable produce per head. Of this \$31, about one-third, upon an average, is required to meet the necessary expenses of clothing, overseer's wages, or superintendence, taxes, physicians' and blacksmith's bills, to say nothing of the expense of renewing the loss of mule and horse-power, and other necessary charges occasionally incurred, leaving a nett profit of only \$20 66 per head of the entire population. We have seen that the entire capital of the State in land and labor is, at a moderate estimate, \$269,000,000, or full \$400 *per capita*, not including in this estimate of value that por-

tion of the population which is a charge upon the active capital. If the natural increase is computed in the account, that of course will in most cases more than cover this part of the expense. This, however, is foreign to the matter in hand. But to this capital of \$400 per head must be added a capital of not less than \$176 more to cover the regular losses from death and decline in the labor actually employed, which reduces the nett profit on the capital to three and six-tenths per cent. per annum. All the capital in labor is sunk in the average period of about 22 years, and \$271, the laboring part of capital, being \$12 34 per annum, which is the interest of \$176 at 7 per cent. per annum.

Let us now suppose the production per head one hundred dollars, (and it is over this amount in half of the eastern States,) after making the same deductions as above, for subsistence and other expenses, there would still be left a net profit of \$59 66 per head. If, under the influence of such a profit from the cultivation of fertile lands, the population were doubled, (as soon it would be,) such lands might, and probably would, be enhanced to five times the present value of the lands of this State, while such a profit would pay more than eight per cent. on the capital thus enhanced, and the lands then be worth more than the same lands now with all the slaves upon them. The large amount of lands now necessarily cultivated to produce a given amount of cotton, corn or other produce being three or four times the quantity necessary, if they were of first quality, and the consequent increased amount of labor expended in cultivation, show conclusively the low condition of our agriculture.

It is too obvious to require extended illustration, that the slow advance of our population mainly arises from the impoverished condition of our lands. As lands become exhausted, the returns are not only small and unremunerating, but crops become uncertain, from casualties and vicissitudes of seasons, subsistence more precarious, and obtained at greater cost. The striking fact that those districts possessing naturally the best soils are almost stationary in population, while districts of inferior soils naturally are filling up, show not only the exhausted state of the soil in the former, but prove that the character of slave labor and the system of cultivation adopted are unfriendly to density of population.

The exhaustion of our lands above alluded to is further evinced by the fact, that in the last thirty years they have remained generally stationary in price, and in many instances have actually declined. Another fact very significant of this truth is the regularly increased amount of lands cultivated in

different crops per hand, particularly in cotton, while the amount produced is proportionably less. This amount now ranges generally from about four and a half to ten acres per head for the entire population.

The opinion frequently put forth, that white labor is unsuited to the agriculture of this State, on account of the heat and other deleterious influences of the climate on the constitution, is not borne out by the facts set forth in the table. That the constitution of the negro is better adapted to endure the heat of our climate and the influence of malaria to which he is exposed than the white man, none will dispute. But this does not arise altogether from difference in natural constitution. The white man—born, raised and habituated to exposure and labor in the field in our climate—will be found equal to the task in any parts of this State free from the influence of the excessive malaria of stagnant waters and putrid exhalations. These are deleterious to the constitution of both, though in a different degree. To illustrate this matter more in detail, let us now glance at the facts set forth in the table. Commencing in the mountain range of districts we find Anderson, with only a fraction over one-third of her population slave or colored, standing by the side of the very highest of any in the State in the list of productive industry, in the compound ratio of labor and land. In the next range below we find Laurens, with only about half her population of slaves, and fewer in proportion to the white than any in the range, with one exception, stands highest in production of any, not only in the range, but of any in the whole State, both in the compound ratio and in the simple ratio of population. In the same range we have Lancaster, with still fewer slaves—only 45 per cent. of the whole population—standing next to Laurens and Newberry, the two highest in the range of productive industry. It will not be pretended that the white labor does not enter largely into the labors of the field in all those districts, but particularly in those named.

Descending still lower to the alluvial range of the middle country, we find Barnwell, Chesterfield, Lexington, and Marlboro', all having a slave population below the average of the range, and yet all standing above the range in production; in Chesterfield the slave population being little over one-third. Coming lastly to the seaboard range let us compare Horry and Georgetown districts, lying side by side on the tide waters of the coast. Here, in Georgetown district, if there be any in the State calculated to exhibit the superiority of the negro in field labor, in a hot climate, it is in this

district. Here, indeed, he seems to flourish, for here he is nearly in entire possession. Here he cultivates the most costly lands—of three times the average value of those of the rest of the State—here culture is upon a grand scale, and order and system are said to prevail—here the white population is only one-tenth, about sufficient by their superior intelligence and capacity to direct and govern the other class, and leave few idlers in their own. Yet, elsewhere, we find the production per head only \$45 11 in the compound ratio, and a little above the average in the simple ratio of population. Horry, by the side of the last named district, is thinly populated, by reason of its very poor lands—being estimated by its proprietors at an average of only seventy-six cents per acre—so very forbidding in its general aspects that people of any description labor with great difficulty to find their way there, but a few having done so. Its population at the last census was but little over one-third that of Georgetown district, and only about one-fourth of this population are slaves. Yet the value of the productive industry of Horry is \$53 37 per head in the compound ratio, considerably exceeding that of her neighbor, and a little above the average of the whole range, in which the slave population average sixty-seven per cent., and all except Horry engaged in the cultivation of the richest staples of the State. To this we may add, as the crowning glory of Horry, that she has advanced in population in the last decade in a ratio exceeding that of any one of her sister districts in the State, and about equal to that of the average of the United States.

THE HYBRID RACES OF ANIMALS AND MEN.

The following interesting paper was recently read before the Boston Society of Natural History by Dr. Samuel Kneeland, jr., a well known naturalist.

STERILITY OF THE HYBRID RACES, ETC.—The strong mania which has of late years manifested itself for unnatural crosses in birds and quadrupeds, might, if properly investigated, and with an eye to science rather than to gain, lead to many interesting facts bearing upon hybridity. I do not refer to the impositions passed upon a public always ready to be cheated, but to the real, bona fide crossings of allied and remote species.

There was a time when most naturalists believed that all our varieties of domestic stocks, as of cattle, sheep, goats, dogs, fowls, &c., were derived from each genus respectively, from a single wild original; and that man's care, or rather his abuse, had obtained from this the numerous existing varieties. In the present state of our knowledge, we think we are justified in saying that the varieties of cattle, of the

dog, &c., have been produced by the crossing, natural and forced, of several more or less nearly allied species; for instance, who shall dare to decide between the Asiatic buffalo, the European aurochs, and Cuvier's extinct species, as the undoubted wild original of the varieties of our cattle? Whence the necessity of reducing all varieties to a single stock, endowed with great powers of variation, especially when there are several wild species, each equally entitled to be considered the original? It seems to me that the simplest view of the case is the best, viz., that these varieties are the result of the mingling of many species, guided by the wants or caprices of man. In other words, I believe that no one wild original can lay claim to the origination of the varieties of our cattle, of our sheep, of our goats, of our dogs, of our barn-yard fowls; and, to carry the opinion to the legitimate consequence, that no *one* species of man can lay claim to the paternity of all the human varieties.

The reasons for this opinion have been often stated to the society, and need not be repeated here; some new observations will only be added in confirmation. And yet, with this belief in the diversity of origin of our domesticated animals and the human races, it seems to me that hybridity is a true test of specific difference. It is an axiom with some, that different species will not produce fertile offspring, and hence, to them, the fact of the production of such offspring proves that the parents belong to the same species. On the contrary, Dr. Morton makes different *degrees* of hybridity, the offspring being more prolific according to the nearness of the species; thus making hybridity no test of specific difference. Of these two opposite opinions I prefer the first. By a hybrid race, I do not understand an offspring prolific for a few generations, and then gradually dying out, or feebly supported by crossing with the original stocks, but a race capable of propagating itself, without deterioration, without any assistance from any of the parent stocks; such a race, I maintain, the world has never seen, and never will see, under the present laws of animated nature. You may take any part of the animal scale, from a barn-yard monster to a mulatto, and the fact is the same; they cannot hold their own; they must and do return to one or the other primitive stocks, or must die out, unless crossed by the pure originating blood.

The subject which suggested these remarks is the sterility and deterioration of some of the highly-bred varieties of our domestic fowls. It has become quite a general source of complaint by many farmers in this section of the country, who in times past had plenty of eggs, and to spare, from a small number of common fowls, that since the origin of the mania

which has happily been called the "Hen Fever," they have found themselves, with their improved gigantic breeds, unable to procure any thing like their usual supply of eggs from the same number of birds; and that they have not only raised the birds at the expense of several dollars a pound, but have been obliged to buy eggs for family use. This has become such a source of annoyance and pecuniary loss that it deserves to be considered. It is a natural consequence of forcing birds from different countries and of different origins, to propagate a hybrid offspring, for this very reason prone to degeneration, which is increased by the impossibility of crossing the hybrids by the pure supposed originals. The size of the birds seems to be obtained in this case at the expense of the reproductive powers, the admixture of different original species, and breeding "in and in," have been carried beyond the limits fixed by nature, and deterioration is the result.

To ascend from birds to man—what we have seen in our domestic fowls, we find occurring again in the mulatto, and other hybrid human races.

The mulatto is often triumphantly appealed to as a proof that hybrid races are prolific without end. Every physician who has seen much practice among mulattoes, knows that, in the first place, they are far less prolific than the blacks or whites; the statistics of New York State and city confirm this fact of daily observation—and, in the second place, when they are prolific, the progeny is frail, diseased, short lived, rarely arriving at robust manhood or maternity; physicians need not be told of the comparatively enormous amount of scrofulous and deteriorated constitutions found among these hybrids.

The Colonization Journal furnishes some statistics with regard to the colored population of New York city which must prove painfully interesting to all reflecting people. The late census showed that while all other classes of our population in all parts of the country were increasing at an enormous ratio, the colored were decreasing. In the State of New York, in 1840, there were 50,000; in 1850, only 47,000; in New York city, in 1840, there were 18,000, in 1850, 17,000. According to the New York city inspector's report for the four months ending with October, 1853:

1st.	The whites present marriages	- - - - -	2,280
	Colored do. do.	- - - - -	16
2d.	Whites present births	- - - - -	6,780
	Colored do.	- - - - -	70
3d.	Whites present deaths, about	- - - - -	6,000
	(exclusive of 2,155 among 116,000 newly arrived emigrants and others unacclimated.)		
	The colored present deaths	- - - - -	160

Giving a ratio of deaths among acclimated whites to colored persons of 37 to 1, while the births are 97 whites to 1 colored. The ratio of whites to colored is as follows :

Marriages, 140 to 1 ; births, 97 to 1 ; deaths, 37 to 1.

According to the ratio of the population the marriages among the whites during this time are three times greater than among the colored ; the number of births among whites is twice as great ; in deaths the colored exceed the whites not only according to ratio of population, but show 165 deaths to 76 births, or 7 deaths to 3 births ; more than 2 to 1.

The same is true of Boston, as far as the census returns will enable us to judge. In Shattuck's Census of 1845, it appears that in that year there were 146 less colored persons in Boston than in 140, the total number being 1842. From the same work, the deaths are given for a period of 50 years, from 1725 to 1775, showing the mortality among the blacks to have been twice that among the whites. Of late years Boston probably does not differ from itself in former times, nor from New York at present.

In the Compendium of the United States Census for 1850, p. 64, it is said that the "declining ratio of the increase of the free colored in every section is notable. In New England the increase is now almost nothing." In the southwest and the southern States the increase is much reduced, it is only in the northwest that there is any increase, "indicating a large emigration to that quarter."

What must become of the black population at this rate, in a few years ? What are the causes of this decay ? They do not disregard the laws of social and physical well-being any more than, if they do as much as, the whites. It seems to me one of the necessary consequences of attempts to mix races—the hybrids cease to be prolific ; the race must die out as mulatto ; it must either keep black unmixed, or become extinct. Nobody doubts that a mixed offspring may be produced by intermarriage of different races—the Griquas, the Papuas, the Cafusos of Brazil, so elaborately enumerated by Prichard, sufficiently prove this—the question is, whether they would be perpetuated if strictly confined to intermarriages among themselves—from the facts in the case of mulattoes, we say, unquestionably not. The same is true, as far as has been observed, of the mixture of the white and red races, in Mexico, Central and South America. The well-known infrequency of mixed offspring between the European and Australian races, led the colonial government to official inquiries ; and to the result, that in 31 districts, numbering 15,000 inhabitants, the half breeds did not exceed 200, though the connexion of the two races was very intimate.

If any one wishes to be convinced of the inferiority and tendency to disease in the mulatto race, even with the assistance of the pure blood of the black and white races, he need only witness what I did recently, viz: the disembarkment, from a steamboat of a colored pic-nic party of both sexes, of all ages, from the infant in arms to the aged—and of all hues, from the darkest black to a color approaching white. There was no *old mulatto*, though there were several *old negroes*; many fine looking mulattoes of both sexes, evidently the first offspring from the pure races; then came the youths and children, and here could be read the sad truth at a glance; the little blacks were agile and healthy looking; the mulattoes, youths, and young ladies, further removed from the pure stocks, were sickly, feeble, thin, with frightful scars and skin diseases, and *scrofula* stamped on every feature and every visible part of the body. Here was hybridity of human races, under the most favorable circumstances of worldly condition and social position; and yet it would have been difficult, and I believe, impossible, to have *selected*, from the haunts of crime and poverty, more diseased and debilitated individuals than were presented by this *accidental* assemblage of the victims of a broken *law* of Nature.

Such facts and sights as the above convince me that hybridity is a true test of specific difference; and that admixture of species, in man or animals, must end, sooner or later, in deterioration and extinction—very soon, if unmixed with the pure stocks, and later, if thus unmixed—that, at any rate, extinction of the hybrid race is its doom, either by death or absorption into the parent races. For wise purposes, which we can know but imperfectly, the Creator permits, as we see, different races of men and animals to produce fertile offspring *inter se*; thus far and no further can man go in his attempts to mingle species, which change perceptibly within narrow limits, and then perish, or return to their origins. One of the consequences of the above opinion is that the *genus Homo* consists of *several species*.

MEDICAL TOPOGRAPHY OF FLORIDA.*

No. II.

In a continuation of our subject, but briefly introduced in the last article, prairies come next in order.

This name, once and originally given to artificial meadow lands, is in the United States conferred upon those vast

* By E. S. Gaillard, M. D., in *Charleston Medical Journal*.

tracts which the hand of nature, in her display of infinite variety, has thus peculiarized. From the reports of travellers and naturalists, we have had described but three kinds of prairies, as found principally existing in America; and as the curiosity and research of our countrymen, in their westward emigrating tendencies, have been no less praiseworthy than their characteristic energy and zeal, it is not likely that we shall have other varieties added to the list. We find, then, in America, the healthy or "bushy," the dry or rolling, and the wet or alluvial prairies. The first variety is most commonly found in the middle States, and ranks highest in agricultural interest; the second is peculiar to that vast tract of country included within the parallels of longitude 93° and 123° west; the third is found in most of the southern States. In the Carolinas, these lands are but of small extent and known as savannahs; when of this size in Florida their name is somewhat similar, the Spanish term *sabana* being used; but when, as usual, they are large, this comparative extent Americans designate by the word prairie. The wet or alluvial prairies are found throughout this State, but most frequently in its eastern division. The adjective alluvial is misapplied, for, though most commonly wet, but little alluvium is manifested. The character of the soil is such as to render these bodies of land extremely valuable to the agriculturist; and, when placed in arable order, they have proved equal to the best in the State. Although in their natural condition the superficial water is constantly varying with the contingencies of the weather, the health of the country adjacent is but little affected. A stranger is impressed with admiration and surprise when first beholding one of these beautiful bodies of land; generally level, (or if undulating, but sufficiently so to relieve monotony,) clothed in a carpet of verdure, and bedecked with the gorgeously tinted flowers of nature—more welcome to the wearied eye of the solitary traveller than was ever the city of the prophet to the wistful gaze of the pilgrim. We can imagine nothing more calculated to excite the ardor, zeal, and enthusiasm, of the scientific botanist than an introduction to such a spot; and we doubt not but that, where terrene and aquatic vegetation has by the liberal hand of nature been so profusely scattered, his most assiduous labors would be more than rewarded. These fields in Florida have, as yet, been but superficially explored by the lovers of botany, although more closely allied to the tropics in vegetation than those more favored by this beautiful science. The profession should sit with an expectant eye when the curtain which has concealed

these natural beauties is being finally lifted. There cannot be a doubt but that the catalogue of vegetable medicine will receive a most welcome and valuable addition, and in this light only is the vegetation of this region specifically interesting to the physician. Unlike the prairies of the great west—whose branches, like the tributaries of the Mississippi, form one family—those in this State are, with few exceptions, isolated. The wild and luxuriant growth upon the fertile soil—the verdant slopes bounded and broken by expanses of the clearest water, upon whose surface, “glassing soft as skies,” rests beauty painted in flowers—the dimness of the distant outline relieved by the waves of the forest—make, in all, a picture to be justly celebrated by the power which should guide the tracery of the brush, or the enthusiasm which characterizes the lyre. To render perfect so Arcadian a scene, one welcomes with pleasure the pastoral attendants which evidence the no distant habitation of man. Here a group is seen lazily cropping the luxuriant herbage, there another standing idly and refreshingly in the cooling stream, whilst a third reposes with a comfortable ease under the welcome and delightful shade. Such is a spring scene presented by the prairies of Eastern Florida.

The cities of Florida are but few in number, and all of them limited in population, and wanting those evidences which characterize a city. St. Augustine, situated on the Atlantic coast, thirty miles below the mouth of the St. John's river, is the oldest city in the State. The material of which the houses are built is taken from a neighboring island, and consists of concrete sea-shell. This city is unique in its appearance and unlike any other in America. On every side one sees and is impressed with the conviction that its founders were of a class all traces of whom have long since disappeared. In St. Augustine the architecture, manners, habits and customs of the inhabitants all bear record of its antecedent history. The houses, with large balconies, spacious doors and windows, their terraced foundations affording to the pedestrian, from the extreme narrowness of the streets, a twilight shade at noon-day, the gardens invariably attached to each habitation, the orange, the pomegranate, the olive and the lemon, speak to us of the countrymen of Columbus, and tell to the beholder that the evidences around bear silent, yet lasting testimony, to the joys and pleasures of the Castilian's home. The custom among the ladies of St. Augustine of proscribing in their evening walks the orthodox bonnet for the more pleasing and fascinating Spanish substitute, the veil, is now a welcome peculiarity throughout Eastern Florida. The litto-

ral aspect of the city is sandy, yet offering a fine beach for the invigoration and enjoyment of the many invalids who have made this a place of annual resort. Perhaps on no part of the Atlantic coast is one exposed to a more humid atmosphere, where the thermometer varies thirty degrees in a single day and the surface of water is so seldom flecked with ice. This peculiarity alone makes constant fires necessary throughout the winter months, a matter of unwelcome surprise to the northern consumptive who leaves his snow and ice bound land in anticipative search of a uniform and vernal temperature. It is a matter of surprise to the profession that invalids should select the humidity, variations in temperature, unpleasantly frequent eastern breezes, with all of their concomitant and consequent evils existing on the Atlantic coast of this State, in preference to Western and Middle Florida, where climateric advantages are to be fully realized and enjoyed, unvitiated by the ills just mentioned. This is no suggestion, but an experiment successfully made, which negatives the supposition of inane speculation. There are many both from northern and less southern States who in themselves bear living testimony to the hygienic and atmospheric advantages of our western and middle sections. Custom, habit and priority of settlement have made East Florida the Montpelier and Bordeaux of the United States; and experience proves its capability of sustaining this reputation. But where the same advantages may be derived (as in Tallahassee, or Pensacola,) without the serious objections stated, it is singular that these pilgrims should come so far in search of their Bethesda, and, whilst assured of "the moving of the water," stand yet lingering about "the porches." St Augustine, from its miserable commercial inducements, has for years been stationary in enterprise, and almost so in population. As a market for indigenous fruits, it formerly enjoyed a considerable trade, but as this luxury is yearly commanding less of the agriculturist's attention, such fortuitous advantages must be lost. The bar at the entrance of the harbor not having more than ten feet of water, commerce can never be invited thither, and the back country is not sufficiently fertile to command the capital necessary for removing such obstructions. When, therefore, invalids cease to select this city as a place of resort during the winter and spring months, it must fast sink into its inevitable destiny—annual retrogression; and this last must continue until its importance shall become, in character and nature, entirely provincial.

Pensacola, once the capital of West Florida, is situated on a gulf of the same name, having a geographical localization

by latitude $33^{\circ} 32'$, and by longitude $10^{\circ} 18'$. This town was once of exceeding medical importance, being the spot to which the unhappy consumptive was most frequently directed. Its reputation for health was once inferior to that of no single locality in the State. Its surrounding country, like the littoral portions of Florida, is sandy, so much so as to induce a peculiar gait in the inhabitants, similar to the rocking observed in the sailor. To that sex, in Pensacola, whose physical organization necessitates this peculiarity of gait, the sand must give it an exaggeration calculated to take captive the heart of the most punctilious tar. Now that the excited controversy relative to the indigenous or imported cause of yellow fever is absorbing the attention of many prominent in the ranks of our profession, Pensacola, it is to be hoped in appropriate testimony, will be represented by her physicians. The reputation of this city among invalids, suddenly, it appears, subsided, consequent upon an invasion of yellow fever, which, in the summer of 1822, brought anguish and desolation to the hearthstone of its inhabitants. It was by the authorities supposed to be caused, at the time, by extreme neglect in an observance of those sanitary measures so essential to the physical welfare of all maritime communities. This fever prevailed during the year mentioned in very nearly all of the cities on the gulf, and if the reason assigned for its existence in Pensacola be correct, it certainly was a most *marvellous* coincidence. Singular that so many communities, believing the enjoyment of previous health to have been dependent upon their sanitary measures, should have, as it were by common consent, become so neglectful of their previous and habitual watchfulness, as the disease, in the various cities, prevailed with an almost *uniform* malignity. Still more singular is it, that the inhabitants should, without any concert of action, have observed so uniform, similar and *proportionate* an indifference. To the eye of reason it appears utterly impossible; such a conclusion could have been but the result of a superficial examination into the manifest cause of the calamity! *Contagion suggests itself* as being the only ground on which such phenomena can be reconciled and explained. As the adjacent country is dry and sandy, the indigenous origin of this fever would seem a manifest impossibility, unless the authorities of Pensacola, in utter inconsistency with their previous and subsequent course, became utterly reckless and regardless of the grave consequences of inexcusable neglect. Granting, however, this to have been the case, it seems inconceivable that in sister cities, and at the exact time, so unusual and culpable a policy should have

been pursued. Contagionists would in this instance assign the apparent and almost manifest cause; but non-contagionists, with laudable enthusiasm and zeal, would, in regard to these ill-fated localities, betake themselves to a diligent study and laborious analysis of their miasmatic geographies, promising the usual and heartfelt anathema upon such reprehensible municipalities. Under all circumstances, and whatever be the result of this most interesting and important controversy, grasping either horn of the dilemma, this unfortunate and cruelly abused body of men demand the sympathy of the most obdurate. If the non-contagionists be right, they have, by "their gross neglect," much to answer for here, and if the contagionists be right, they have, from misconduct, *more* to answer for hereafter! Verily are they indeed to be pitied; more to be commiserated than the poor old Moorish king, when frantically riding

"up and down,
Through Granada's royal town;
Letters to the monarch tell
How Alhama's city fell—
Wo is me, Alhama!!"

It would appear, from the present state of this controversy, one could not adopt a better maxim than "*in medio tutissimus ibis.*" The prevalence and malignity of yellow fever, in the cities of our Atlantic and gulf seaboard, seem to have been the result of an imported cause, grafted upon those already existing; the published history and accounts of the disease, as prevailing in Charleston during the summer of 1854, warrant, suggest and justify such a conclusion. It appears that, after the importation of the cause, the disease first manifested itself in the low water lots and unhealthy localities of the city, and that it did not prevail in the higher and more elevated sections until assuming the character of an epidemic. The *materies morbi* was first lighted up, reasoning a posteriori, in regions most favorable to its existence, and did not become epidemic until the atmosphere from these sources had become generally contaminated. It is reasonable to infer that those residing in the healthiest localities had also early connexion with the infected vessels; such must have been the case, but these, it appears, escaped, or if affected at all, but secondarily; that is, either from those not as happily located, or when the disease from them became epidemic. The history of other places, in regard to this disease, proves that it cannot long prevail, or at least not long enough to become epidemic, unless supported by local causes. Though the disease be carried there, unless these unfortunate and unhappy adjuvants exist, it speedily dies out. We do not, however, doubt the

fact of this disease having rapidly disseminated itself, even when local miasm (whether *iduo* or *koino* in nature) was inappreciable, or even non-existent. Testimony of the most reliable character has long established this point, and so satisfactorily, that under similar circumstances we cannot but expect a repetition of this dire calamity. Extreme malignity of the disease, or a concentration of its poison in certain instances, seems quite sufficient in producing its extension. The disease appears, in *most instances*, to have prevailed as the result of an imported cause, grafted upon those already existing; the first, by proof, is alone sufficient for *extension*; the last seem insufficient (unless the report of the New Orleans sanitary committee, the reasoning, deductions and inferences of which are questioned, be considered) for the origin of this pestilence. The prevalence of yellow fever, as the result of grafting imported upon local causes, is at least, as a view of the subject, safe and protective in nature and practice. It inculcates, upon each municipality, the necessity of strictly discharging their regulations in regard to hygiene, and demands the *sine qua non* of a most rigorous quarantine; for it is not to be even hoped, that the atmosphere of a city shall ever become so pure as to wholly prevent the extension and desolating effect of this malignant poison. Let cleanliness and quarantine be our ægis for the present; zealous ardor, laborious research and analytic investigation our course for the future.

Pensacola should be deeply interested in the result of this controversy; for if the contagionists be able to establish their ground, and prove its correctness to earnest searchers after truth, to fortify, with fact and force of argument, the reasonable and almost self-suggestive position taken, there is nothing to prevent her regaining her past and pristine reputation—from again offering her balmy atmosphere as a recuperative asylum to the afflicted.

Tallahassee, the capital of Florida, is situated in Leon county, and is not more than three miles north of the elevated and rolling chain of hills which in a great measure bound the shores of the Mexican gulf. It was selected as the seat of government in 1824, and the ballot-box in 1854 determined that it shall ever remain so. The capitol, for the size of the place, is quite an imposing building—chaste in the style of its architecture, massive and spacious. The climate of Tallahassee is pleasant and agreeable, offering great inducement for the hybernation of the northern invalid. Old authorities state the range of thermometer as varying from 28° to 88° Fahrenheit; the climate has certainly

changed since then, though the mercurial range has not increased; it may be given now as varying from 30° to 90°. The extremes in this register seldom occur; the winters are comparatively mild and agreeable, and the heat of summer seldom great. During the hot months the gulf breezes counteract the influences of the sun, and their effect, balm and welcome, can be enviably imagined by the pallid and prostrated metropolitan of less favored latitudes. The nights in summer, here, as in most parts of the State, are cool and refreshing; one "wraps the drapery of his couch around him and lies down to pleasant dreams;" when the pleasant morning arouses him from his slumbers, he rises strengthened and invigorated, realizing the happy truth and beauty of that conception which, for tired nature, derives a "sweet restorer," in this, "the twin brother of death." Tallahassee, being the seat of government, is necessarily crowded during the session of the State legislature; this, with the frank hospitality of its inhabitants, and the attractiveness of its climate, certainly offers strong inducements to those who annually resort to the State, for a preservation and improvement of health, during the cold months of winter. With uniformity of temperature, the advantages of literature and society, it is certainly surprising that this place is not selected, in exchange for temporary residence in the east. Difficulty of access has been a great impediment; but when the great system of State railroads is completed, there will be a direct communication with the Atlantic coast.

The yellow fever has once, in this inland city, prevailed to some extent, but since the fire which destroyed a large part of it, the disease has been unknown. The fire immediately checked this fever; but whether it had run its course, attacked the susceptible, and so perished—whether the advanced season was inimical to further extension—whether the fire destroyed, by consumption, local causes, or acted as a purifier and disinfectant to the contaminated atmosphere—has not been determined. We are inclined to adopt the last view. As statistics in regard to this disease, during its prevalence in various localities throughout the State, would be interesting, and perhaps valuable, to the controversialists and the profession, we will endeavor to collect the most reliable facts and details, and shall present them when treating of yellow fever as one of the pathological branches of our subject.

Jacksonville, situated on the St. John's river, is rapidly becoming a place of commercial notoriety; it has been selected as a terminus to one of the railroads embraced in the

system of State improvement. When these roads are completed, it may increase to no inconsiderable importance. Its back country can never make it so; for, though interspersed with valuable hummocks and occasional prairies of rather limited extent, the *tout ensemble* is inimical and unfavorable to so desirable a result. This place is one of the great resorts, among the northerners, in winter, and it has so far sustained an untarnished reputation. The authorities are, in their administration, orthodox and strict contagionists, and during the summer of 1854 became conspicuous in an open declaration and maintenance of their relative views.

Newport is a commercial town of comparative recent existence. It is situated on the St. Mark's river, and is the outlet for the staples of Middle and Western Florida. Its population is small, and the place makes but little progress in the acquisition of city accompaniments and associations. Should it (or rather the contiguous and adjoining port, St. Mark's) be a western terminus to one of the railroads, it must become conspicuous and a place of note. These last ports are subject to occasional inundations, and such disasters bear a very marked relation to the extent and malignity of their diseases. Newport and St. Mark's, though surrounded by sandy pine land, have at times been desolated by yellow fever; the pathological statistics, in this respect and otherwise, will elsewhere be described.

Pilatka, situated also on the St. John's river, is the last in the series of towns in Florida, which possess direct medical interest. This place, during the Indian war, was one of the many stations which the federal government had created in the State. Proving extremely healthy, it has been gradually built up, and promises gradual, yet eventful increase. It is beautifully situated on the river, and when refinement and wealth have made their impress on the adjacent country, this place will offer many inducements to the immigrant. Pilatka has in recent years been selected by many invalids, as a place of resort during the winter, and on this account there is constant fluctuation in the extent of its population. Several hotels have been erected, and these are generally crowded during the colder months. The prospective victims of that northern plague seek, in its genial climate, a brief yet happy respite from their suffering; but "the life of all this blood is touched corruptibly," and if permanency characterizes not their move, the charm from the skies which seemed to hallow them here is broken, and prematurely they sink to that sleep which knows no waking.

There are many other towns and villages in the State, but

they offer as yet only a provincial interest, and cannot in so brief a sketch be noticed. Madison, Monticello, Quincy, Waukeenah, Mariana, Newnansville, Alligator, Micanopy, Euchee Anna claim, each, their page, but the specific nature of our subject does not warrant this; they are each but forming the first chapter in their medical histories, and the few remarks, if now made, would but constitute a preface more properly belonging to the volume of their future.

The rivers of Florida having courses of much length rise in the highlands of Georgia, Alabama, and Mississippi; those which empty into the gulf take their origin in the first mentioned State. The Appalachicola divides Western from Middle Florida; it is the longest and largest river in the State, and after a long and tortuous course empties into Appalachie bay. The St. John's, a large and picturesque stream, rises in the centre of the peninsula; if there be romance in the soul of the voyageur, a quiet sail upon its placid bosom cannot but arouse it. Foreigners have, however, scandalized our nation in charging upon us an utter want of this, one of the divinest attributes of humanity. We certainly, as a people, too devotedly worship tangibilities and realities, and these in turn magnify the evil, by making the meat we feed upon animal comfort and an intellectually profitless wealth; but it is a libel upon the American to say that to him romance is unknown. The ruined and ivy-grown tower, the deserted and dilapidated castles—manifestations of nature's age, and the melancholy records of those who have been—tend in the olden countries to inspire this emotion; in the new they are unseen and physically unknown; but in exchange we have scenes which the hand of Nature, in her majesty, beauty, and sublimity, has traced upon the canvass of our country. We gaze not on the hoary and time-worn ruins which embank the Rhine; nor upon the moat, the drawbridge, and barbican which gave security and power to the ivy-clad castles of Scotland; we climb not the ice-capped peaks of Switzerland, nor breathe not the classic atmosphere of Greece and Italy; but upon the highlands of the Hudson, in their extent, majesty, and grandeur, the cosmopolite gazes in homage, admiration, and awe; *our* castle is our country, the temple of liberty, which needs no defence other than the hearts of its worshippers; *our* mountains are its spires, which greet the rising sun and are gilded by its departing rays; from the virtuous, the heroic, the beautiful, the good of other nations, and from the originality of our own, we are constructing a literature, mighty even in its infancy. These slanders upon our country and countrymen are fast passing away, refuted by the

struggles which give sanctity and respect to the past, the greatness and enterprise which mark the present, and the bright prestiges which cast a halo around the future.

But we have, in defending one of the attributes of our countrymen, forgotten one essential to the writer, infrequency of digression; to return, then, to the subject last engrossing our attention. The St. John's river, rising in the centre of the peninsula and flowing with a gentle current northwardly, widens into a bold and majestic stream; it either passes through or forms several lakes; one of these, the St. George, is indeed a beautiful sheet of water, and as placid as beautiful. The St. John's gradually bends eastwardly, and finally falls into the Atlantic forty miles north of St. George. The farms on this river, with their fields extending to its margin and the houses in the distance, present fine views from the steamer's deck, and when we pass beyond the limits of cultivation, the stream is bordered with the dark verdure of forest growth. One here realizes the feeling produced in disturbing the deep silence of nature's vast solitude.

A beautiful feature observed in travelling upon this river is the variety and frequency of islands scattered upon its surface. These insulated little bodies of land are covered with the heaviest forest growth and tangled underbrush; with miniature beaches of white and glistening sand, they appear in the distance as pearl-bordered settings of emerald upon a back-ground of sapphire. There are many reports published in regard to the floating islands of Florida, but it is needless to say that such are entirely false; there could have been no desire to deceive on the part of the reporters, but their conclusion was formed only after a superficial examination. These apparent islands are most frequently noticed in the lakes and bayous, and prove to be nothing more than compact masses of aquatic vegetation, with roots, stems, and leaves indiscriminately mingled, and floating about in obedience to the caprices of wind and current. The inland bodies of water are often covered with "a curious growth of aquatic plants, termed by botanists *pistia stratiotes*." This is "commonly, but not correctly, reported to vegetate on the surface of the water." Detached from the locality of their growth, these plants drift about until, perhaps, considerable surface is formed; they are then taken into the current, and floating thus have given rise to reports of the natural anomaly—a floating island. This singular vegetation spreads itself like a carpet over the waters; under it the fish find a welcome harbor, the concealed alligator pursues his ungainly and

awkward gambols, and from its midst the wild fowl rises, and wheeling are quickly lost in flight.

The Suwanee is at present the natural, but arbitrary, division between Middle and Eastern Florida; it rises in the southern part of Georgia, and after flowing southwesterly, empties into Vaccassar bay, on the Gulf. This has been the only river in Florida which, even in burlesque, has ever been given to poetry and song; we crossed it on a burning day in June, and certainly saw, at that hour, little to inspire either the poet or the minstrel. The fluvial topography of the State is as yet not susceptible of justice; there abounds so much unreclaimed and unimproved land, that the rivers cannot well be, or have not been accurately traced out and explored. Writers on this subject have limited material at command, but it is to be expected that in a few years, when the general introduction of steam and the telegraph bring their concomitants, energy and enterprise, forests will give place to fields, and present solitudes to the busy and merry hum of an active and enquiring population.

There are many other rivers in the State, the Perdido, St. Pedro, Conechu, Ocklockney, Corelia, Charlotte, Hillsborough, Vilchees, Alaqua, Econfina, Oscilla, Histahatchee, Chatawatchee, Achenahatchee, Nasau, St. Nicholas, Chatahatchee, &c.—but of these not much is intimately known; at least, very little of botanical or medical interest.

The botanical field of Florida is but little explored; extensive in magnitude and variety, it is to be hoped that some enthusiastic lover of this important science may devote his labors to its investigation and subsequent publication. There can be no doubt of novelty, interest and variety in this department, and certainly "*le jeu vaut la chandelle.*"

It will be observed that Florida, in her geographical designations, has in a great measure retained the language of her aborigines. Such a course cannot too highly be commended, and it is to be regretted that the custom is not national and, with us, universal. All nations have a language, and this alone is peculiar to us; if not made a conversational and literary medium, at least let it characterize the soil which indirectly gave it birth. The Indian language certainly should not be *proscribed* on account of an occasional sin against euphony, for it is generally harmonious as well as acceptable, and its etymology, when examined, both suggestive and correct. All traces of the aborigines are yearly fading away, and as history has not embraced them in her province, through the soil of their "hunting grounds," at least, let them tell to future generations the melancholy tale of their bitter exist-

ence and terrible destiny. Let their memory be hallowed thus by the soil over which they once trod in innocent happiness, and their language, so perpetuated, be in regard to their fate—

“Expression’s last receding ray ;
A gilded halo hovering ’round decay.”

It may be said in regard to the rivers of Florida, that they are numerous, and an important feature in the geography of the country ; there are few sections too far removed from these water-courses to derive profit and improvement from them. In the aggregate they are long and tortuous ; their bars such as to exclude other than schooner and steamboat navigation. Medical topography cannot well take cognizance of them, for their adjacent country is too little improved and populated to come within the daily province of the profession. As we have been fortunate in obtaining, among the authorities consulted, a condensed, yet full description of the bays and inlets of Florida, we cannot do better than present it.

“From the uncommon levelness of the country on the sea-shore, and from the numerous rivers that intersect it, there is no part of the world that for the same extent has so many inlets, sounds, narrow passes of water between islands, and communications of one point of the shore with another, by an inland channel. The whole coast is almost a continued line of these sounds ; and it is beyond a doubt, that at a comparatively small expense, a canal, communicating with the sea in an hundred places, might be made from New Orleans to the river St. Mary’s. From this river to the Sabine, and we may add through Texas, almost every river that enters the Gulf, just before its entrance spreads into a broad lake, communicating with the sea, and the water is partially salt. From one of these lakes to another there is often a wide natural canal, with from four to six feet water. Those on the shores of Florida are too numerous to mention with particularity. Perdido bay, dividing Alabama from Florida, is thirty miles long, and from two to six broad ; Pensacola bay is thirty miles long and from four to seven wide. This bay affords the best harbour on the Gulf shore ; Bayou Texas enters from the north, above Pensacola, and is four miles long and a fourth of a mile wide ; St. Rosa sound connects the bays of Pensacola and Chatawhatchee. This is a charming sheet of water, forty miles long and about two wide : a narrow peninsula divides Pensacola bay from this sound for thirty miles ; it yields five feet water in its whole length. Chatawhatchee bay is forty miles long and from seven to fourteen wide ; it receives a number of creeks, is much affected by storms, and

was formerly the seat of a profitable fishery. St. Andrew's bay is protected by a number of small islands, receives some navigable creeks, has deep water, is twelve miles long and five wide; St. Joseph's bay is twenty miles long and seven wide; Apalachicola is twelve miles long and from four to six wide; Ocklockney is twelve miles long and two broad; Apalachie bay is a circular indentation, in which is the port of St. Mark's, the nearest point to Tallahassee; Histahatchee offers a safe harbor for small vessels; Vaccassar is the easternmost bay in West Florida."

We have inserted this long extract, because it contains the most valuable information, in the smallest possible compass; it may be of importance for future reference, and we know not where these valuable details may elsewhere be obtained. There is no part of Florida, in regard to which the profession may sooner need these abbreviated and necessary facts.

The lakes of Florida are many in number and large in extent; beautiful, placid, and ornamental, though not so attractive as that which in the poet's vision appeared "margined with fruits of gold and whispering myrtles, glassing soft as skies, save with rare and roseate shadows." No subject embraced in the medical topography of the State bids fair to be of more interest to the profession; the health of the adjacent country varying, in some instances, with the character of the subjacent soil, the extent and condition of the water. Mickasucke lake, fifteen miles northeast of Tallahassee, is twelve miles long; around its borders have been discovered traces of the fields and orchards of the aborigines. The health of the country adjacent to this and other localities will be described when treating of the diseases of the State. Lake Jackson, northwest of Tallahassee, and surrounded by some of the richest lands in the State, is eight miles long and three broad. Jamony lake, fourteen miles north of Tallahassee, is eight miles long and three broad. Tallahassee lake is near the city of similar name; 'tis Chefnico's old town that once occupied its southern shore. Inundation lake has been newly formed by the inundation of the Chipola; this lake is twenty miles long and seven wide; though deep, the forests not many years since were still standing. Badford's and Jackson's lakes are not many miles from Tallahassee; the latter is a large and beautiful sheet of water, being fifteen miles long and over one wide. This lake was once subject to sudden increases in the depth of its waters; it is thought to have a subterrene outlet, and these sudden rises are attributed to a stoppage in this concealed channel. During the time of General Jackson's campaign, lake Jackson was but a small

and shallow pond. The lakes of Florida have not attracted much of the attention of writers, since the country became a part of our Union; of the previous facts and interests connected with them very little is known, for Spaniards were lords of the soil, and from the silence of their government, history redeems scarcely more than uncertainty and obscurity. A priest, calabozo, commandant and a file of soldiers, when made the custodians of a country, seldom preserve or rescue anything interesting and valuable to our profession. Of the hygienic importance of these lakes there is nothing of sufficient uniformity to admit generalization; such as may be of particular importance will be noticed with the relative lake, when treating of the fevers of the State. These bodies of water must in time lend beauty, variety, and attraction to the Floridian's home; for wherever occurring in the world they are no less a subject of attachment among a people than a geographical characteristic of their soil; Loch Lomond, Wetter, and Leman! at the mention of thy names how throbs the heart and fires the eye of the poor exile from the countries which you designate. When her people invest their places with homes interests and home affections; when permanent occupants take the place of nomadic adventurers; when architectural beauty, floral adornment, and the amenities of social life bring about the union of heart and hearth, then shall the lakes of Florida inspire all the patriotism, enthusiasm, and affection that music has sung or poetry apostrophized.

It is to be regretted that so little is known of the chemical importance of the great variety of springs found in the State; their waters will become one of the most prominent features in her future medical history. We are not aware of there having been instituted more than one or two chemical analyses, and these are not published in any works or articles on the subject that we have had the good fortune to read. Of the physical characteristics of these springs much more is known, but even in this respect scarcely more than an initial chapter has been presented. Many of the rivers in the State derive their origin from a spring; the Chipola, Chatawat-
chee, Wacissa, Wakulla, &c., may each thus be traced. The size and extreme depth of many of these springs strike the reflective beholder with admiration, wonder, and surprise, and early attracted attention to the anomaly of the country's subjacent formation. A quaint, but correct old authority thus concernedly speculates on this subject: "There seems to be all over this country a *substratum* of soft stones, at equal depths, which is cavernous, and admits numberless subterra-

near brooks and streams to have their courses far under ground. In places they burst out in the form of those vast boiling springs which form *rivers at a short distance from their outlets*, and by their frequency, their singular forms, the transparency of their waters, and the multitude of their fishes, constitute one of the most striking features of the country."

There is no theory relative to the production of springs, yet offered, sufficient to account for the vast volumes of water thus ejected from the soil of this country. The doctrine of earth's capillary tubes, of subterranean siphons, of water seeking the level of a distant origin, are insufficient for explaining the phenomenon as here manifested. Most probably, as suggested by some author whose name we forget, the waters of the sea, at some high elevation, enter the many interstices, cropped out and formed by the peculiar character of the substrata, pass through channels naturally existing, and filtered of saline particles by occasional obstructions, they thus permeate the subjacent soil, and where the density of the earth's crust is insufficient to counteract the force by which original level is sought, the immense volumes burst through and so are ejected into the superincumbent atmosphere. The peninsula form of the State certainly gives plausibility, at least, to such a view.

Among the many springs we might describe we shall select only one. Wakulla spring, which forms the river of similar name, is twelve miles from Tallahassee, and is certainly the largest and most wonderful spring in the State. The stream ejected is able to bear a boat on its surface, immediately below the fountain. It is difficult to reach the spot by navigation, as the waters are clogged with flags, rushes, weeds, &c.; this mode is, however, considered best, as conducing to give the most pleasing and wonderful view of the spring. Suddenly the immense mass breaks upon the eye, a circular lake in size and appearance, with waters as clear as crystal. The depth of this spring is incredible and almost inconceivable; it was sounded for two hundred and fifty fathoms, and there is no reliable testimony of the bottom being then found. From the pellucid and aerial transparency of the water, from its wonderful depth, and probably from sulphuret of lime being held in solution, the fountain presents the color of a paling sapphire. Whilst gazing upon this wonderful creation of nature and attempting to analyze the unfathomable depths below, one beholds the clear and perfect reflection of heaven's concave, with clouds flitting across its field, as it were a transient breath upon the surface of a faithful mirror. Many who visit this spring are thus disagreeably affected, feeling as though suspended be-

tween two atmospheres ; the feeling is one of giddiness, which disappears on approaching the margins, where trees and shrubs usurp the place of clouds and sky. The meaning of the Indian word Wakulla is, the mystery—a conception as chaste as correct.

There are very many other springs, but a description of these would be physical entirely ; and tediousness, but not monotony, would attach to such consecutive detail. Of all the manifestations of nature in the State, these are the most interesting to the profession, whether reference be had either to their natural or therapeutic properties. In regard to the first, a single example affords evidence sufficient of their prominence among the physical characteristics of the country ; and in regard to the latter it is only to be regretted that analytical chemistry has not hitherto sufficiently evinced the value of her labors to enable our offering the important results. If there be published analyses of these waters, we are not yet in possession of them. We will endeavor to acquire accurate information on the subject, and shall take pleasure in presenting matter of such peculiar value and interest to the profession ; meanwhile, if any casual reader shall be able to offer this desideratum, it will be received most thankfully. We saw many months since in one of the literary organs of this, or some adjoining State, that the water of a spring, discovered near Pensacola, had been accurately analyzed, and that the result proved it to be a great acquisition to the country ; the water, in its composition, being very similar to that of Congress spring.

It will be perceived that we have not adhered to our intention of treating of springs in connexion with the diseases which were modified or benefitted by them ; superficial inquiry alone induced the belief that this course, from causes just stated, would have been impracticable, and such a plan would have destroyed the little method attaching to these desultory and hastily written sketches.

The islands of Florida are many, but unimportant, belonging as yet more to the geography than the topography of the State. St. Rosa island is a long and narrow strip of land between St. Rosa bay and Pensacola. The Tortugas lie opposite the southern shore of the peninsula. Anastatia lies near St. Augustine, separated from the main land but by a narrow channel. On the western shore there are Hummock, St. Vincent's, Crooked, St. George's, James, and Dog islands. These uninteresting little bodies of land are usually covered with pine forests, and from this idea one may anticipate the nature of their soil—poor, sandy, and sterile.

Florida is not without her natural curiosities, a truth which her natural caverns, sinking rivers, great springs, and natural bridges abundantly attest. I have from one who has visited two of these caverns the following description: The descent of Arch cave is under a vast rock of limestone, which at great depth expands into a spacious gallery one hundred feet wide and fifty high; from this the visitor passes through a long and rude gothic archway, at the end of which is a running stream twenty-five feet wide and five deep; beyond this he suddenly emerges into a crystal-lined chamber of an hundred feet in length, supported with massive pillars, and adorned with stalagmite and stalactite formations. This cave has been explored for four hundred yards, and may yet contain concealed and unknown beauties. "Lady's cave is still more spacious; this, too, has its galleries, chambers, domes, sparry columns, stalagmite and stalactite formations, and its cold, deep river winding through its dark and diversified passages." Econfina and Chipola rivers both pass under natural bridges. Near Tallahassee is a pond formed not very many years ago (during the time of earliest American immigration we understand) by a sudden sinking of the earth, which descended with the entire superincumbent growth; the concave is fifty feet deep and the bottom is water of depth unknown. Near Mosquito is a warm mineral spring, discharging, like most of those in the State, vast volumes of water; quite sufficient to enable a boat, it is said, to float in the fountain. The character of the water is sulphurous, and already is it the resort of the rheumatic invalids of the vicinity. The fountain possesses characteristic and beautiful transparency, and abounds in fish. Old towers and roads, abandoned and grass-grown causeways, forts and noble plantations, and avenues of majestically beautiful live-oaks are found as melancholy epitaphs throughout the country; speaking to us of that distant time when flourished a people of whose existence and associations history declares her ignorance.

We cannot omit mentioning, among the physical characteristics of Florida, her orange groves. Though "the sighs of orange groves" is only a conception, yet a happy one in the poet's mind, there is much of poetry's atmosphere and associations pervading them. One of the finest groves in the State is *par excellence* designated and known as Orange Grove. This grove is found about the dividing line between Marion and Alachua counties, and forms a beautiful peninsula into Osage lake. Here a natural plantation of evergreens, three hundred acres in extent, and of this two hundred are solely

occupied by this charming tree. This tropical grove presents one of the many beautiful exhibitions of nature, in her luxuriant and exuberant mood. Moisture and heat stimulate vegetation into the exaggerations of vigor and strength. These slender trees, straight, flexile, and inimitably graceful, shoot taperingly up, twelve or fifteen feet in height, their expanded branches clad in umbrageous green. In the creamy light of our southern sun, how glisteningly gleam the verdant and polished planes of the pendant leaves, small, smooth, ovate, and coriaceous—interweaving, as it were, to form the sylvan luxury of subjacent shade. The snowy blossoms, in all stages of development, from the bursting bud to the matured flower, (in the purity of its perfect white,) shake perfume from their floral envelopes, as disturbed by the dalliance of the zephyrs. Ensconced in this profusion of bloom and verdure, pendant from their fragile stems, swing the mellowed spheres, like golden orbs in ether; whilst as you gaze through green-pillared vistas, tranquil lakes, sleeping in placid serenity, reflect the glancing rays of a sun, lighting up this garden of beauty.

[To be continued.]

WESTERN TEXAS.

We have a climate unsurpassed, even by the far-famed Italy. Our winters are short and *very* mild. We have what are termed *northers* occasionally during the winter season, which, when accompanied with rain, are really disagreeable, but when unaccompanied with rain, which is generally the case, (for we seldom have much rain during the winter season,) they are not at all disagreeable, but are rather pleasant than otherwise. The climate here through the winter much resembles the pleasant parts of the months of October and November in the northern States.

The commencement of spring here generally dates from about the middle of February. Planters commence planting about the middle of February or the first of March, and from that to the middle of June. Early planting is considered the best, for then they have the advantage of the early spring rains to start and the June rains that *never fail* to mature their crops. Two years ago this fall we saw a field of cotton that was planted on the *last* day of June (in new ground) that yielded 500 lbs. of picked cotton per acre. We would ask in what other State in the Union was it ever done?

Our summers are long, but, strange as it may appear, less oppressive than in higher latitude. The sun shines with

great force, it is true, but nevertheless the air is always cool, and almost invariably we have a gentle breeze from the southeast to fan us with its pleasant breath; and then our nights are always cool and pleasant. No one can ever complain of a sultry night in Texas. But the autumn season is the most pleasant of the year. There is a mildness, purity, and serenity in the atmosphere that is perfectly charming and indescribable.

The scenery of western Texas, we venture to say, in point of beauty and variety, is second to that of no other country in the world—from the bold and rugged mountain steeps, where the cool clear waters gush from living fountains, interspersed with rich valleys, teeming with luxuriant growths, to the wide-extended prairies, with their gentle undulating surfaces covered with a rich dress of living green, bespangled with a thousand different varieties of wild flowers, exhibiting every hue, tint, and shade, and presenting a picturesque view of commingled grandeur, beauty, and softness which may be felt and enjoyed by the lover of the beautiful in nature, but of which words fail to give any adequate idea.

Game of all kinds is abundant, and the numerous streams, from the mountain rivulet to the river, are filled with the finest kinds of fish.

One of the greatest of the resources of Texas, if not *the* greatest, consists in her pastoral advantages. Her whole surface is covered with a never-failing green sward, that affords a perennial supply of food for domestic animals. Hundreds of thousands of horses, mules, cattle, sheep, &c. are raised annually that never taste a mouthful of grain or even of hay, but live and thrive wholly upon the spontaneous bounties of nature. The keeping of stock costs its owner nothing but the hire of his herdsman. Stock of all kinds are very prolific, and disease among them is almost unknown.

We have a varied soil, well adapted to raising almost every kind of grain and plants, and which in point of fertility will compare favorably with the soil of any other State in the Union. Corn, wheat, rye, oats, barley, millet, cotton, sugar, tobacco, potatoes, melons, and an endless variety of garden vegetables are successfully grown here. Peaches and figs are the most common fruit; apples and pears have been sufficiently experimented upon to show that they can be cultivated with success; plums and grapes are indigenous. We have been told by men who were raised in Louisiana, and who are well acquainted with orange growing, that oranges can easily be raised here. We will venture to say that more produce of almost every kind can be raised in western Texas,

with a less amount of labor, than in any other State in the Union.

The fact is persons live here with so little labor that they become indolent, and we do not believe that half the produce is raised that might be by the same people were they to use the industry practiced by the people of the older or northern States. To industrial enterprise no State, no country offers a better or a wider field than western Texas. The lands are cheap, the soil rich, with a sufficient amount of timber for building, fencing, &c., without much difficulty in clearing; and the country is rapidly filling up with an intelligent and enterprising population.

Some may say we have no river navigation, no railroads, by which to transport produce to market after it has been raised. As yet we have not, but planters can have their cotton taken from this vicinity to the bay for seventy-five cents per cwt., which we dare say is as cheap as most cotton planters in other States get their cotton to the seacoast towns. Cotton of Indianola or Port Lavaca can be taken to the northern markets or to Europe very nearly or quite as cheap as from any seaport in the south. It is true we are subjected to some inconveniences, but they are generally such as have to be met by inhabitants of newly-settled countries.

The tide of emigration is rapidly pouring in, and we hope the day is not far distant when we shall have a population to fully develop the rich resources of our youthful State; when, for the transportation of our produce, the cart shall have been supplanted for the swift-urged car; and when the prairies, over which now grazes the mustang in peaceful quietude, shall teem with fields of golden grain, and the wild flower that now waves its head to the morning breeze shall tremble at the approach of the iron horse.

ANCIENT SLAVERY.

The history of slavery, and its incidents at different times and under diverse circumstances, cannot be estimated too minutely, or with too great circumspection. Whether it be right and wise, as all who advocate the continuance of the institution are logically and morally bound to maintain, or whether it be wrong but expedient, as so many of its apologists imprudently assert; or whether it be sinful, atrocious, and ruinous, as the abolitionists of every hue and clime exclaim, it has been since the world began, or at least since societies assumed a stable form and a definite character, one of the principal and most enduring arrangements of humanity. As such, it

merits a complete and impartial appreciation in all its manifestations.

The speculative interest of the question of slavery is very far transcended by the practical necessity of an adequate solution of its various and intricate problems. The permanence of the Union, the harmony of the American people, the prosperity and, in a great measure, the good repute of our southern population, require that the subject should be candidly examined in all its aspects, so that, if possible, acquiescence in the conclusions established by argument and research may introduce unity of sentiment in regard to this apple of discord.

In every investigation of social questions, the history of the institutions discussed is the first, and perhaps the most difficult task to be accomplished. The inverse method, however, was first adopted, and has usually been employed by both the defenders and the assailants of slavery. They have endeavored to enforce the conclusions arrived at by ingenious reasoning from unascertained premises before the facts were determined which must constitute the basis of any valid argument relative to the organization of societies. The abolitionists proceeded in their indictment of slave-holders like honest Dogberry: "Masters, it is proved already that you are little better than false knaves; and it will go near to be thought so shortly." Nor was their calculation erroneous, for with a jury of Dogberries the verdict was certain. Unfortunately, the issue was at once accepted in this blundering form by the defendants, and the earliest replies amounted to nothing more than a plea of confession and avoidance. We are beginning to suspect our error, and to change our line of defence.

But our adversaries have anticipated our move. The more temperate among the opponents of slavery have already altered their tactics, not perhaps from any conviction of the greater propriety and cogency of the historical method of procedure, but because they have been driven back to the examination of the past by the difficult inquiries prescribed by the labor question in Europe, and the impossibility of finding an adequate answer to the ever incumbent riddle by contemplating the present, or drawing deductions from the arbitrary postulates of imaginary morals.

The slavery question and the labor question are indeed identical; they interpenetrate each other, and are branches of the same inquiry. It depends entirely upon the point of view adopted which is to be considered the principal, and which the subordinate member of the division. To us, the former

would be the capital investigation ; to the disciples of free labor, the latter would be the chief head. Whichsoever of the two might be assumed as the point of departure, it would necessarily lead to the consideration of the other ; and thus the miseries of the laboring classes in the great free communities of the world, and the imperative demand of some alleviation or explication of those miseries, have excited the slavery agitation, and led to the historical investigation of the condition of slaves in different ages.

Already, numerous and elaborate treatises have been written on the history of slavery. These have appeared principally in France, where the social disturbance has been most felt, and most profoundly analyzed. But the abolitionists of England, and of the northern States, have not been idle in turning this weapon to their account, and have accordingly produced some historical narratives, which belong to the category of partisan diatribes, rather than to the sober class of instructive chronicles. The French works on this text are learned, acute, and industriously compiled ; they are impregnated, of course, with the poison of fanatical prejudices, are colored with the peculiar sentiments and sociological reveries of their authors, and are moulded by the influences which dictated their composition, and by the political purposes contemplated in their production. But, if not impartial, they are written at least with a sincere attempt at honesty. This is more than can be usually said for similar attempts in our own language, which are for the most part hasty compilations, patched together without discrimination, enriched by the idle stories and copious misrepresentations of trashy newspapers, but illumined by neither philosophy nor learning, and unredeemed by either intelligence or sincerity.

So far, we have resigned almost entirely into the hands of our adversaries the all-important task of composing the history of servitude. We have scarcely ventured to challenge any of their statements. We have been negligent of their labors, inattentive to the probable effects of their works, and indifferent to their misconceptions or misrepresentations. The field has been left in the keeping of the enemy. We have not sufficiently estimated the immediate interest which we have in preserving pure and undefiled the current of historical information, nor have we been solicitous to resist, before it may be too late, the flood of literary calumny and philosophical misapprehension which threatens to sweep over us.

The history of any institution is the collection and criticism of the evidences which sustain or condemn it. It is the

record and collation of the facts to which all available argument must appeal, in order to enforce its conclusions. If, therefore, it be written in a spirit of error, or of malevolent partiality, it prejudices the question of slavery to our disadvantage, and confounds our philosophy by the array of false but unchallenged testimony which it marshals against us. Opposition is vain, unless we seize the hostile battery, and turn against the adversary the same guns which have been making havoc in our ranks. The strength of our convictions, the soundness of our reasonings, the ingenuity and cogency of our speculative combinations, will prove utterly futile, unless we first conquer the facts which barricade and protect the hostile position. If we cannot overcome the statements opposed to us we may submit at once; if we cannot change their significance and tendency, by discovering their error or their partiality, we may lower our arms, and acknowledge that we have been blindly upholding a bad cause, and that victory is denied to us because we have been contending against the truth. But until this effort has been fairly made—until we have canvassed and sifted the history as well as the philosophy of slavery, and discriminated the true lessons of the past from the mistaken or distorted inferences extracted from its archives, our cause is undefended, and we concede the vantage ground to our antagonists, and then affect to be surprised or indignant at the advantages which they have gained from their position.

The slavery question and the labor question must be discussed in all their bearings and in all their developments. The peace, the advancement, the existence, of civilized societies requires this. Every interest, even every Utopian sect, must find utterance, and present its own exposition of the facts, its own solution of the difficulties presented to our time. When all have spoken, a general concurrence may be attained; but that concurrence will be unfavorable, perhaps ruinous, to the slaveholding communities, unless they, too, find a voice for the expression of their views, and examine and interpret for themselves the series of facts wrested from their true sense to their discomfiture.

A fact may be a very stubborn and invariable thing, but there are infinite varieties in its appearance, according to the aspect in which it is seen. When a mountain extends before our eyes it is impossible to deny its reality, its solidity, or the unchangeableness of its actual outline; but its physiognomy will undergo a marked change with every change of our local relations to it. If mists or clouds intervene, so as to conceal either its summit or its base, it will assume so

many, so diversified, and so widely separated forms, that it will be difficult to recognize its constant identity. The same phenomena are exhibited by facts. They carry a different expression on their face, and convey a different significance, according to the side on which we approach them. Thus, before a fact can be received as conclusive evidence of the justice of any position, its exact bearings must be determined with something like mathematical precision, and the effects attributable to individual differences of opinion must be carefully eliminated from the general result. This is the function of history, but it is also the explanation of the discords among different histories of the same facts. Moreover, where the facts contemplated are removed from us by time and place, they are always in some degree concealed or transmuted by the vapors which collect around them. These must be dispelled before we can accept the facts alleged with any confidence, or feel assured that the interpretation given to events has not been deformed by prejudice, fancy, or delusion.

These considerations illustrate the necessity of requiring a history of slavery and labor, written from a southern point of view, if we cannot obtain at once a truly impartial history of those topics. But this must be a work of time and of tedious perseverance, and we must wait patiently in the hope of its ultimate accomplishment. Meanwhile, however, as a preliminary task, or as an immediate policy, we may examine distinct branches of the general subject, and scrutinize the representations already proposed. It is in this spirit that we have undertaken the criticism of some of the characteristics of ancient slavery.

On this branch of the subject several able works have recently appeared in France and in Germany; some of them discussing it incidentally, some of them examining only detached topics; some treating it in connexion with the general history of slavery, or the general history of labor, and some specially devoted to the period of antiquity, or to one division of that period. An instructive essay on Roman slavery has been lately published in a contemporary review by a learned professor at the north. We do not name either the essay or the author, because, in the employment of the statements advanced in the periodical referred to, as a text for our own remarks, we do not design to attack views peculiar to the author, but generally received doctrines which he has only reproduced. The essay to which we allude conveys much valuable information, and condenses much learning, original or borrowed, into a convenient shape; although it tends to

confirm prevailing impressions, by adopting and applying, without suspicion, the conclusions commonly entertained in France, Germany, England, and by the opponents of slavery in general. It is amazing with what undeviating pertinacity prejudices, and opinions founded upon prejudices, descend from generation to generation, and migrate from country to country, passing everywhere uncontradicted because admitted everywhere without interrogation or suspicion. The article to which we refer is written with the good temper and sobriety which so peculiarly characterize the candid student of history; and it is so rare to find these qualities amid the ordinary declamations of the adversaries of slavery, that we turn to its pages with pleasure, though its conclusions are all hostile to the institution itself.

Proudhon makes the acute and just observation, that the improved processes and complicated machines of advanced civilization do not altogether supplant the simpler contrivances of an earlier and ruder age, but only restrict the range of their application. It has more frequently happened, and is theoretically more probable, that the more ingenious and expeditious methods will be forgotten and replaced by the primitive procedure, which they had temporarily displaced, than that the latter has been, or should be, entirely abandoned. There are many lost arts which even modern science is unable to recall. We are ignorant how the immense blocks employed in the construction of the Pyramids were quarried or lifted into place; and are equally uninformed as to the manœuvres by which the stones of the monolithic temples of Egypt were transported to their present positions, and wrought into their present forms. The same thing is true of institutions. The simple and original types never entirely disappear. They may be pushed aside for a time; they may be confined to particular localities, and subordinate functions; and they may undergo strange and delusive transmigrations, but they always exist, and tend always to reappear with the recurrence of the former contingencies. A moment's reflection will convince us that it must be so. The earlier institutions are spontaneous and natural; they are dictated by a universal necessity, and spring from the inspirations of instinct. The later forms are artificial, and are contrived by the calculating reflections of men, to satisfy the artificial requirements generated by the complex and factitious development of societies.

Slavery is a notable illustration of this grand truth. Since Abraham descended from Ur of the Chaldees, and from a period anterior to the birth of Abraham, it has always existed.

Before Aristotle wrote, ancient abolitionists fulminated their denunciations against it. It still exists, and it is impossible to point out any era, of which history keeps the record, when it did not exist among the greater part of the earth's inhabitants. It seems impossible to eradicate it. Legislators have made the attempt in vain, and have always been baffled. It was attempted, without success, in the Eastern Empire, and by the sovereigns of England and France.* In the Synod of Westminster or London, held under St. Anselm, in September, A. D. 1102. The church endeavored to anathematize the slave trade.† In vain. Slavery has never been extinguished by legislation in any independent nation. It has only been abolished in a few dependent colonies, too weak to resist arbitrary measures, by the revolutionary governments of France, and the Parliament of Great Britain; and by the deceptive and futile procedure of the Spanish republics of America, where nominal slavery has been exchanged for a harsher, real slavery. Wherever it has even temporarily disappeared, it has been exorcised, not by legislative enactments, nor by moral impulses, but by the growth of more urgent and incompatible interests. When hired labor became permanently more profitable than compulsory labor, slavery gradually passed into proletarianism, and the laborer was certainly not the gainer by the exchange. The manumission of a slave, without providing him with the means of supporting himself, is regarded by the Mahometans as a grievous punishment; ‡ and the justice of the sentiment is confirmed by the modern experience of the laboring poor. They have passed from the domination of a humane, or at least human master, and are bowed down beneath the yoke of a crushing and merciless routine.§ It is the confession of all recent observers that the free laborers, in nearly all countries where free labor prevails, are more the slaves of circumstance and necessity than their progenitors ever were the slaves of men.

Se questa è vita o morte, lo non comprendola,
Che chiaman libertade, e più s'allacciano.

In these countries slavery has only changed its name and

* A. D. 423-5, John, the Usurper, attempted to abolish slavery. It was abolished, as a penalty, by Justinian, A. D. 536. Novell. 22. Its abolition was proposed in England by Richard II, and in France by Philippe le Long and Louis XVI. A bill for the purpose was laid before Parliament by Henry VIII, and rejected. Serfdom still exists in Northumberland. On the extinction of villenage, see Hallam, *Mid. Ages*.

† Rémusat. *St. Anselme de Cantorbéry*, liv. I. c. xvi, p. 321.

‡ Note to Lane's *Arabian Night's Entertainments*, vol I, p. 360. *Smaller Engl. Ed.*

§ "Pourvu que la soumission soit toujours ennoblie par l'amour, ce que le joug humain comporte mieux que l'empire extérieur, elle devient autant favorable au bonheur privé qu'au bien public." Comte Pol. Pos.

form, and depraved its character by the change; so that the few who clearly recognize this fact, propose the actual re-introduction of the name, as well as of the reality, in the same spirit in which Fletcher of Saltoun in old time advocated its re-establishment, as a boon to "so many thousands of our people, who are at this day dying for want of bread."* So early in the progress of emancipation was it noted that freedom of labor and starvation of the laborers were concomitant phenomena! An eminent French writer has expressed regret at the precipitancy with which the emancipation of the serfs was effected at the close of the Middle Ages;† and the avowed necessity of recurring to the abandoned practice proves the reasonableness of the regret, and, at the same time, the persistence of the principle and institution of slavery.

But it has been steadily denied by the majority of modern theorists that slavery is either just in itself, or consonant with the laws of nature; and consequently it would be illogical to extend to it those considerations which might be appropriate to natural institutions. We shall not repeat a discussion so often and so fully undertaken elsewhere, but shall content ourselves with citing in the note below two testimonies from St. Paul and St. Thomas Aquinas, neither of which has, so far as we are aware, been adduced before.‡ We may add too that the philosophical demonstration employed by Aristotle to prove slavery both natural and just, after having been strongly endorsed by Lord Bacon, has been approved even in England by his latest biographer.§ Slavery, however, is abundantly proved to be natural by the fact of its being spontaneous and universal. Deviations from the rule may occur, but they are partial and transient, and no more prove that slavery is not a natural incident of society, than illegitimate children and foundling hospitals prove the relation of father

* See Fitzhugh's *Sociology for the South*, ch. III, pp. 51-71, and the *N. Y. Times*, and *N. Y. Herald*.

† Quoted by Herbert Spencer. *Social Statics*, Pt. III, ch. xxii, § 5, p. 285, and see Dove *Hum. Prog.* ch. III, p. 353-4.

‡ "Who art thou that judgest another man's servant? To his own master he standeth or falleth: yea, he shall be holden up, for God is able to make him stand."—*Rom.* xiv, 4.

"Art thou called being a servant? care not for it: but, if thou mayest be free, use it rather.

"Brethren, let every man wherein he is called, therein abide with God."

1 *Cor.* vii, 20, 24.

* * * * "dicendum, quod hunc hominem esse servum, absolute considerando, magis quam alium, non habet rationem naturalem, sed solum secundum aliquam utilitatem consequentem, in quantum utile est huic quod regatur a sapientiore, et illi quod ab hoc juvetur, ut dicitur in I. *Politico*, cap. V. circ. fin. Et ideo servitus pertinet ad jus gentium est naturalis secundo modo, sed non primo modo."—(*Summa Theologiae*, *Sec. Secunda Qu. LVII, Art. III.*)

§ Blakesley's *Life of Aristotle*, chap. III, p. 52-4.

and child to be unnatural; or woman's rights' practices and the unlicensed intercourse of the sexes prove marriage to be an unnatural restraint. The relation of master and slave, (or servant,) stands on the same footing as that of husband and wife, and of parent and child. All admit of violation and abuse, but do not cease to be either natural or obligatory on that account. These three great fundamental and instinctive relations constitute the base on which the edifice of society is erected. Nor are their respective obligations invalidated by any improprieties in the modes of their occasional origination; and whatever objections may be alleged against the inception of slavery, they have their counterparts in the objects which may frequently be brought with even greater propriety against the manner in which the other relations have been commenced.

The modes in which slavery has arisen have been reduced to three, with no great accuracy of division: capture in war, voluntary sale, and birth. The propriety of the last obviously depends, in a great measure, upon the propriety of the others. In all ages, the chances of war have been the principal origin of slavery:

*e serva il vinto
Al vincitor, come di guerra è stile.*

The prisoner is saved, preserved, instead of being killed on the field, or after the battle. The choice is offered between death and servitude, and the latter is chosen. The Gibeonites, who evaded by craft the doom denounced against the heathen occupants of the promised land, were "delivered out of the hand of the children of Israel, that they slew them not," but became "bondmen, and hewers of wood and drawers of water." If we condemn slavery, we sanction murder ipso facto, because, in the ages and among the tribes when and where slavery originates, there is no other alternative.

Voluntary sale is the result of a similar alternative—of the option, if option it can be termed, between starvation and servitude. It is perfectly in accordance with their logic, that the philanthropists, who deny the competence of man to barter his liberty for a price, should also assert, as political economists, the folly of charity, and the necessity of disregarding the sufferings and decimations of the poor. But it is not necessary that the sale should always be voluntary to be proper. The laws prescribe sometimes the sale, sometimes the enslavement, or prolonged incarceration, accompanied with forced labor, of paupers, vagrants, and criminals. The parent may sometimes, with propriety, sell either his

child or himself. A striking illustration of the former case is afforded in the history of the Visigoths, which merits notice as exemplifying one form of the origination of slavery. That barbarous horde had conquered Mœsia, Dacia, and part of Thrace, and, during the prevalence of a famine, they applied to the Roman governors of the conterminous provinces for relief. The greed of the Roman authorities took advantage of the necessities of the barbarians to practise cruel exactions. They plundered the famishing multitude, by imposing exorbitant prices on all provisions, and doling out to them with fraudulent measures unsound food, till they were compelled to sell their children as the sole means of preserving the lives of both the parents and their progeny.* There is no excuse for the artful compulsion due to Roman rapacity; it is the conduct of the vendors which is alone considered now, and the consequences which would result from the absolute prohibition of their act. In their distress, and such distress may occur at any time under other forms, (nay, does continually occur,) and without the nefarious contrivance of purchasers, it would have been a desolating outburst of philanthropy to prove that human creatures could not and should not be bought and sold, and that no rights could be conveyed or acquired by the transaction.† Modern abolitionism and modern political economy have but one panacea for those threatened with starvation: by the mouth of Mr. Herbert Spencer, both say, let them die or rot. With such an alternative, slavery is the more rational and the more humane.

So much by way of illustration of the character of slavery.

* *Cœperunt Duces, avaritia compellente, non solum ovium boumque carnes, verumetiam canum et immundorum animalium mortiana eis pro magno contradere; adeo ut quodlibet mancipium in unum panem, aut decem libras in unam carnem mercarentur. Sed jam mancipus et suppellectili deficientibus, filios eorum avarus mercator victus necessitate ex poscit. Haud enim secus parentes faciunt, salutem suorum pignorum providentes; satius deliberent ingenuitatem perire quam vitam; dum misericorditer alendus, quis venditur, quem morituius servatur.* Jomandes De Rebus Gelicis, c. xxvi.

† A constitution, or code, was enacted in Massachusetts in December, 1641, containing several provisions, or liberties, called "Fundamentals," or "Body of Liberties."

One of these articles, based on the Mosaic code, provides that "there shall never be any bond-slavery, villanage, nor captivity, among us, unless it be lawful captives taken in just wars, and such strangers as willingly sell themselves or are sold unto us; and these shall have all the liberties and Christian usages which the law of God established in Israel requires. This exempts none from servitude who shall be adjudged thereto by authority." Hildreth's Hist. United States, 1st Series, c. x, vol. I., p. 277-8.

Thank you, Mr. Hildreth, for the testimony, if you do refuse us your vote. Observe the Puritanical precision with which Massachusetts sanctions, under the guise of a sanctimonious prohibition as much as the most unprincipled slave-traders could desire.

If, then, it be a natural and spontaneous institution, it may be expected to follow the same course of development as the other natural or spontaneous manifestations of society. Without sacrificing its essential character, it will undergo many changes, modifications, ameliorations, and depravations. The defects of one form and period will be corrected or increased under other conditions. Hence, the abuses of slavery in antiquity, of serfdom in the middle ages, will be no evidence of similar abuses now amongst either the Turks or the Russians; nor would African slavery be proved to be either impolitic or immoral because iniquities might have been attached to the systems of other times. The accidents of slavery do not affect its essence, nor furnish grounds for legitimate conclusions in regard to it; nor do the casual incidents of one age represent those of another.

It is easy, but very indiscreet, to convert a particular observation into a general law, and to make a present or local interest a universal canon of right; and this has been the usual procedure adopted, perhaps on both sides, in the discussion of slavery. But the peculiar characteristics of the usage in different ages neither condemn nor justify the institution in each particular period nor do they reach the main question. The pretence of morality, which has been set up as an objection to slavery, is a very convenient, but a very transparent assumption. Like the halo around the moon, it is occasioned only by the obstruction of the rays of light through the intervention of mists. Thus England has been in the habit of boasting that the fetters of the slave dropped from his hands and feet as soon as he touched the shores of the happy island. Yet, at that very time, slaves could be, and were, openly bought and sold on the London Exchange.* The regulation of law would have been objectionable, if it had been a law, and required by the public interests of the English people; but it would never have risen above the level of domestic expediency, nor could it ever have justified a boast. If there was any cause for boasting, the credit should not be claimed by England, but promptly rendered to the city of Toulouse,† which centuries before asserted this privilege, and applied it probably to the same good use that Romulus did the asylum at Rome—the increase of a scant population.

If slavery be not intrinsically wrong in itself, ancient slavery is not to be judged by mediæval slavery or modern slavery; nor is African slavery to be weighed in the same balances with its predecessors. So far as their accidents and special

* Wade, *British History*, p. 833.

† Dubauge, *Gloss. Med. & Inf. Latin.* Sub voce *Sclavus*.

characteristics are concerned, each stands alone. We do not, therefore, design that either our condemnation or approval of ancient slavery should be extended to serfdom or to African servitude.

There is one wide difference which separates the ancient from the modern system. In antiquity the enslaved people were, for the most part, of the same grade of intellectual and moral capacity with their enslavers. This was not always the case, for the familiar names of slaves which occur in the comic poets, Thrax, Syrus, Geta, show that the uncivilized races of men contributed largely to the servile population. Still Thracians, Syrians, and Goths approximated much more closely to the capabilities of the Greeks and Romans than the Ashantees and Mandingoes do to the culture and intelligence of the Anglo-Saxon and Spanish families. But in ancient times the slave was frequently far superior to his master, as in the case of *Æsop*, *Plato*, *Terence*, *Epictetus*, and the enslaved Greeks. Yet *Seneca* complains of it as an indignity to the philosopher and to philosophy, that *Plato* was redeemed from slavery by *Anniceris* for a quarter of a dollar;* and *Melissus*, though born free, refused his freedom when he had a legitimate opportunity of recovering it.† In modern times, so far as African slavery is in question—the only type of servitude which has been deliberately assailed by the clamour of abolitionists—the race enslaved is confessedly the lowest type of humanity, and the usage thus accords fully with the prescriptions of *Aristotle*, which have been weighed and approved by *Lord Bacon*, and very recently by *Mr. Blakesley*. There are thus many objections to ancient slavery which do not touch the question of American slavery at all; there may be also objections to the latter which are not applicable to the former. For instance, the facility and propriety of emancipation, and the congenial incorporation of the freedmen and their offspring with the undistinguishable mass of the citizens, were a characteristic advantage of the ancient type of the institution, but they are impossible or impracticable in regard to the negroes.

We do not mean to assert that there must always be wrong in the imposition of the servile condition upon races of equal ultimate capacity with their masters. The interests of civilization, and the interests of both the dominant and subject classes, may frequently sanction the perpetuation of the relation even in these circumstances. Servitude may present the

* *Seneca*, *Fragm.* 23. *Apud Lactant Inst.* III. c. xxv, § 15, if HS be not misplaced for HS.

† *Sueton De Illustr. Grammaticis*, c. xxi.

only organization which will discipline, educate, and profitably employ the masses whose development has been retarded by the conditions of their previous life and origin; and it may also be the sole method of restraining and regulating those who have run through the course of their civilization, and become effete. It may be also, and we think it is, the necessary accompaniment of the highest social happiness and prosperity. Burke maintained that the well-ordered liberties of a free people required the presence of slavery;* and Rousseau, a philosopher at the other extreme of political speculation, asserted that slavery was essential to any social equality.† But all that we intend to establish by the contrast between ancient and modern slavery is that the circumstances of the two are different; and that, in a very important respect there is apparently more propriety and justice in the later types. It is, however, preposterous to find the moderns inveighing against the servitude of either an inferior or congenious race, when the whole tendency of their doctrines, their practices, and the social organization of free-labor communities, is to make the mass of the laborers and even of the educated classes, subject to capital, circumstances, and machinery; to render them slaves of the ring and of the lamp; and to degrade and brutalize in the name and by the arts of commerce, manufactures and financial speculation.

With what a naïve simplicity—not to say purblind ignorance—the political economists of Europe, the abolitionists of Exeter and Faneuil halls, with all the other loud-tongued but unreflecting eulogists of the system of free labor, condemn African slavery, because it denies education, advancement, and the prospects of refined enjoyments to the laboring portion of society; and denounce ancient slavery because it degraded the laborer, and rendered labor disreputable! And what are the brilliant effects of free labor and free production in this respect, which entitle its high priests and prophets to fulminate anathemas against all other systems? Greater misery, greater ignorance, greater despair, and greater degradation among the masses. This is the involuntary testimony of the grand sanhedrim of the Scribes and Pharisees. Nay, more: not abashed by seeing misery and wealth, want and luxury, brutality and superfluous refinement, ignorant inca-

* Speech on Conciliation with America, vol. I, p. 187-8, London, 1841. H. G. Bohn.

† Not having the passage before us in the text of Rousseau, we borrow this statement from Proudhon. "Qu'est ce que la propriete."—Ch. v. 2 pt. § 2 1st Memoire, p. 226.

‡ It is thus that Mr Wallace discourses on the subject on the banks of the Amazon, while acknowledging the beneficent effects of slavery before his eyes.—*Travels on the Amazon and Rio Negro*, ch. v. p. 120-122.

capacity and acute charlatanism, increase together with reciprocal augmentations under the development of their boasted system, they vituperate slavery for retaining the slave in a stagnant state of physical well-being, and religiously anticipate for themselves the glorious millenium "when capital shall be delivered from the oppression of labor;" "machinery dispense with the services of men;" the laborers be quietly buried out of sight forever, and the world be divided between rich consumers, rich manufacturers, rich traders, and the machines which supply the first, employ the last, and enrich their owners.* The smoke of incense would then ascend to heaven from the whole earth; the reign of peace and righteousness would have come; but the incense would be the fumes of the factories; the burnt offerings and sacrifices would be holocausts of laboring men, and the world would be the portion of the two beatified classes, which created without labor and consumed without toil—both alike born for their easy vocation, *fruger consumere nati*. This is the Elysium, the golden Jerusalem of the free-labor doctors and quacks. In this devout home of the blessed life to come they immolate the whole body of the free laborers, and revile the slave-holders of all ages because slavery does not elevate the slave to the ample proportions of free humanity, nor afford the stimulant of prospective wealth to his exertions. "Blessed are the meek," (to wit: Cobden, Bright, and the Boston merchants,) "for they shall inherit the earth." "Blessed are the poor in spirit," (the proletaires and the unmoneyed,) "for theirs is the kingdom of heaven"—a short shrift and a speedy death. Truly the philanthropic ravings of pretended political economists betray them into chimerical paradoxes and practical enormities as gross as any of the dreams of communists and socialists, or any of the projects of red republicans!

But we are in danger of forgetting that our present concern is not with modern systems, but with ancient slavery, and the modern objections to it. Excluding the condemnation which is founded on general principles—themselves assumptions, paralogisms, or disguised hypocrisies—the chief censures of slavery, as it existed in antiquity, are that it rendered labor disreputable, and thereby degraded the citizens and impoverished the state; that it displaced the free laborers, and destroyed the population, the industry, and the agriculture of the ancient world; and that it thus constituted the prime cause and most efficient instrument in producing the decay of

* Spencer's *Social Statics*, ch. xxv, §§ 5, 6, pp. 318-326, ch. xxviii, § 4, pp. 376-381. The phrases between quotation marks are quoted by M. Proudhon from an English manufacturer. *Contrad. Scen. ch. iv. § 2, vol. 1. p. 164.*

ancient civilization, and occasioning the overthrow of the Roman empire. These declarations pass from hand to hand, and constitute the circulating medium—the small change—of the anti-slavery philosophers. They pass from Montesquieu to Adam Smith and Sismondi; from these to the political economists generally, and to M. Guizot; thence to Mr. Merivale and to Greeley, Giddings, and Fred. Douglas. Of course, they reappear in the brief contemporary essay on Roman slavery, which has been mentioned at the commencement of this inquiry, as furnishing the occasion for our investigations. The same old coins are transmitted through all hands; they are much worn, but are still as current as ever; they have contracted a disagreeable odor from the number of fingers which have pawed them, but their value is still unchallenged, and is sealed by public acceptance and the popular scent.

A little learning goes a long way. Like the miraculous loaves and fishes, the scant provision of one satisfies five thousand, and the broken fragments far exceed the original store. As little reflection is required in our day, it is the age of machinery. After the pattern of thought has become acceptable and fashionable, it is only necessary to repeat and multiply the fabrics on which it is impressed. New combinations may be desirable; but after a little ingenuity has devised the modifications of the type, machinery, without intellectual effort, is sufficient to achieve the rest. We cannot reasonably complain that so much of our modern literature is merely the scouring of old clothes, and their adaptation to an immediate market; we cannot reprehend recent criticism for discarding profound study and diligently employing itself in pouring old and sour wine into new and flimsy bottles, furnished with a little soda or charcoal to neutralize acidity; we cannot reprove reviewers for emptying diluting liquors out of a bucket into tin pint-pots; or find fault with the learned Professor, who has furnished the sketch of Roman slavery before us, for being content to copy, compile, abridge, and retail, when there was an opportunity to examine, generalize, and construct. As, however, he was the last to issue these suspicious but unsuspected coins, so far as we are informed, we make the essay in which they are contained responsible for their utterances, according to the common law of counterfeits. We attach no blame, however, to the author, whom we do not name, because unwilling to visit the sins of many on the head of one. He received them innocently; he put them forth unconscious of their spurious character. Dropping the metaphor, we traverse these allegations in the form and language in which they appear in the Professor's essay. We shall do

what he has not done, we shall test them; but we do not propose to criticize them as his views, but as parts of the common articulation; and whatever blame may attach to the veteran errors belongs in as large a degree to his predecessors and contemporaries as to himself.

“We find that slaves worked in almost every capacity and occupied almost every position in trades and professions. Where slavery is so general labor becomes disreputable; and at Rome, trade and commerce, unless on an extensive scale, were considered mean and unworthy of the free-born Roman.”

So says the Professor; so have said hundreds before him. He sustains the declaration by citing two passages of Cicero, which have often done duty on the same station. However, he might easily have multiplied his citations from Cicero and the rest of the ancients, and might, with equal propriety, have extended the remark to the Greeks and the other populations of antiquity. The statement, indeed, is usually made in the broadest form. The contempt of labor, and the pernicious consequences of that contempt, among both Greeks and Romans, has become the commonplace of declaimers and essayists; and the high estimation in which industry is held by the moderns is rendered more striking by the exhibition of the contrast. A recent author of distinction adverts with confident hope and pride to the esteem in which labor is now held and its depreciation in antiquity, and infers from this divergence of sentiment that the means of redress for their social difficulties are always within the reach of the moderns, whatever dangers may be threatened.* We shall not altogether deny these charges against the ancients, because these repeated echoes of the same thing, which are reverberated from all points of the compass, are nothing but ineffectual noise—*vox et præterea nihil*. The issue is mistaken; there is a complete *ignoratio eleuchi*. True or not true, indubitable or questionable, these allegations prove nothing, because they do not attain to the real point which should be the pivot of the dispute. Did contempt of labor produce slavery? or was it produced by it? or were they interdependent causes and effects? This knot must be untied before the argument against slavery, deduced from ancient opinions, ceases to be fallacious. Is it certain that the Greeks would not have declined, that the Romans would not have died out, if slavery had been discountenanced by the ancients? Did slavery produce contempt of labor among the Jews? Does

*Chastel. *Etudes Historiques sur l'Influence de la Charité*, &c.

it do so among the Turks? Every man, in both these nations, had, or has, his trade—his manual occupation. Were the overthrow and dispersion of the Jewish people—the chosen people of God—attributable either to the slavery which they employed or the contempt of labor, which they did not entertain? Here are riddles for the assailants of ancient slavery to solve before they repose in their loose deductions. We can promise them confusion and dismay, but no escape, unless they abandon the baggage of principles, assumptions, arguments, and conclusions which they have carried about with so much parade. They have lost their road and marched into a precipitous defile. All that is requisite to stop their conquering progress in this direction is to place a few logs, and other stumbling blocks, across the road. This we have done, and now wish them “*bon voyage.*”

There is some dissimilarity between ancient and modern times in their respective estimation of labor; but this difference has been very much exaggerated and misconstrued, and we do not deem it to be exactly of that kind which is calculated to promise any superior security to the moderns, or to entitle them to the credit of superior wisdom and morality. The current of ancient philosophy and patrician literature does not, indeed, treat manual labor with much consideration or respect. Are the tone of our fashionable novels and the tendency of our fashionable sentiments much more complimentary to it? The ancients openly avowed their disparaging opinions; the moderns say one thing and think another. “They honor it with their lips, but their hearts are far from it.”

There has been much exaggeration and misconception in the statement of the sentiments of antiquity, relative to the dignity or indignity of labor. The ancient philosophers held that knowledge was more estimable than practice, science than art, direction and superintendence than manipulation or manual dexterity. The same feeling is manifested at this day, in the value set upon education, in the distinction between skilled and rude labor, in the preference accorded even by political economy to the capitalist who regulates production on the large scale over the laborer who executes the details. Is not the remark of Cicero, quoted by the unnamed Professor, as applicable now as under the triumvirate—“*Mercatura, si tennis, sordida putanda est?*” Are not small gains still held to be sordid gains? Are not the operations of Baron Rothschild, Emile Pereire, the Barings, the Peabodys, and the Laws held in higher admiration than the

daily toils of a carpenter or a blacksmith? In what does the modern Pharisee differ from the Roman publican?

Change of circumstances has produced changes of expression, but it has produced no fundamental change of sentiment. If we leave the easily misinterpreted dogmas of theoretical writers, and contemplate the actual internal condition of ancient communities, we shall find that industry was as diligently, though not as feverishly, encouraged in them, and that hard work was equally honored during the periods of their healthy prosperity as at present. The writers who have handled this subject have multiplied their citations from the Greek and Roman philosophers and moralists, to prove that slavery engendered the conviction that labor was unworthy of a freeman. We will not stop to ask whether the recent asseveration of the dignity of labor by communists, socialists, and demagogues of every hue, means in its legitimate consequences anything more than the desired emancipation of the laborer from the necessity of working. The life of the early Greeks and Romans, of the Jews and the Tyrians, might have suggested the prudence of modifying the hasty inferences drawn from the Utopian theories and loose declamations of the classics. But even in their philosophical literature there is evidence, which has been overlooked, to establish the fact that the speculative doctrine was limited and conditional. Socrates, in a remarkable conversation, reported or imagined, and at any rate endorsed, by Xenophon,* acknowledges the dignity of labor as perspicuously as any of the moderns; and it is well known that he himself earned a scanty support with his own hands, preferring, like Spinoza, the humble independence acquired by manual labor to any advantages of a more brilliant position. Nor do we find that Socrates, the associate of the noble Alcibiades and the wealthy Critias, the friend and teacher of the illustriously descended Plato and the distinguished Xenophon, the intimate acquaintance of Aspasia, the president of the senate, was treated with any contumely or disdain because he was a mechanic. That, ordinarily, men who had the means of living comfortably without bodily labor preferred to depend upon their revenues or the superintendence of the labors of others, was true then: but is it less true now? If there has been any great change in this respect, how does it happen that the learned professions, government appointments, political avocations, trade, manufactures, speculation, and what are curiously termed intellectual and liberal occupations, are so constantly pursued by young and old, rather than the actual culture of the soil

* Xen. Memorabil. lib. I, cap. vii.

and handicrafts? And how does it happen that pursuits of the former class are so much more highly estimated than the latter by public sentiment and social remuneration? There is very little difference between ancient and modern feelings in this respect; although the difference of circumstances renders it so easy to disguise or overlook the inherent similarity. The homilies on the supposed contrast come with a very bad grace from the apostles and disciples of a system, whose tendency is to substitute inanimate machines for living men—to depress the condition and the character of the laborers—to thrust mature workmen out of employment and the means of adequate subsistence by the cheaper but immoral substitute of women and children—to degrade human capacities and human prospects by constantly applying a higher order of ability to an inferior service, which could be equally well performed by inferior talent—and ultimately to eliminate altogether human labor, and destroy the laboring class.

The difference of opinion and condition between the two ages consists in the presence of slavery in one community, and its absence in those later societies where the treacherous doctrine of the dignity of labor and the freedom of the laborer has prevailed. The ancients bought labor in the lump and furnished the entire support of the laborer. This is still done in slaveholding populations. The rest of the moderns buy labor by retail, and curtail the subsistence to the time of employment and the degree of competition, not measuring it by the wants of the man. Both display the same contempt of labor, and the same repugnance to work; and both seek, as far as possible, to escape from the dire necessity. The esteem, or disesteem, has been nearly equal in both periods; but it was honest and avowed in antiquity, and is pretended or disguised at present. But there is one point in which the ancient philosophers differed essentially from modern fanatics and political economists. They taught the contempt of money, and illustrated their precepts by their conduct. Our contemporaries encourage, by preaching and example, by theory and practice, the acquisition and multiplication of gain, without mercy for the sufferers, or consideration for the starving multitude.

Quoad vixit, credidit ingens.

*Panperiem vitium, et cavit nihil acrius; ut si
Forte minus locuples uno quadrante perisset,
Ipse videretur sibi nequior; omnis enim res,
Virtus, fama decus, divina humanaque, pulchris
Divitiis parent; quas qui contraxerit, ille
Clarus erit, fortis, justus. Sapiens ne? Etiam; et rex,*

Et quicquid volet. Hoc, veluti virtute paratuno,
Speravit magnæ laudi fore.*

This is the language of satire reproving the vices of nearly the most depraved period of Roman history. But this is the serious doctrine of abolition—the sober philosophy of the advocates of exclusive free labor. We do not propose to justify the ancients by condemning the moderns, or to cast out devils in the name of Beelzebub, the prince of the devils.

Nil agit exemplum, litem quod lite resolvit.

We simply design to show that the charges of the moderns against ancient slavery may with equal justice be directed against themselves, and the practices which they so strenuously, but so blindly, vaunt.

[Concluded in our next.]

MANUFACTURES, MINING, AND INTERNAL IMPROVEMENTS.

AGENCIES TO BE DEPENDED ON IN THE CONSTRUCTION OF INTERNAL IMPROVEMENTS WITH REFERENCE TO TEXAS—NO 3.

FALSE POLITICAL ECONOMY—WHAT IS IT?

My definition would be, *mismanagement*, either public or private, connected with the requirement on the part of the people to bear the loss resulting from it. When a burden is inflicted on the people beyond just necessity, to that degree does the infliction emanate from a false political economy. True statesmanship seeks to avoid existing evils at the least possible expense to community, and looks carefully to the employment of means adequate to guard the future. It goes further. It seeks to promote and accelerate the prosperity of

* Hor. II., Sat. III., vv. 91-'99. The line afterwards quoted occurs v. 103 of the same passage. Here is the commentary: "C'est en vain qu'on tenterait d'innocenter la falsification Parisienne; elle existe; elle a ses maitres, ses habiles, sa litterature, ses traités didactiques et classiques," &c. M. Louis Leclerc, apud Proudhon. "Were the shop keepers put upon their examination, how would they excuse their trade practices? Is it moral to put potatoes and alum in bread—to add salt, tobacco, and colchicum to beer—to mix lard with butter—to manufacture milk in various known and unknown ways; to adulterate oils, chemicals, colors, wines, in short, everything capable of adulteration? Does the existence of inspectors of weights and measures indicate morality? Or is it honest to sell over the counter goods whose quality is inferior to that of the samples ticketed in the windows?"

* * * "Disagreeable questions might be asked concerning the proportion of cotton woven into some fabrics pretended to be wholly of silk. The piracy of patterns, too, would be a delicate subject. And the practice of using gypsum to increase the substance and weight of paper could hardly be defended on the principles of the decalogue," &c., &c. Spencer's Social Statics, ch. xx., § 4, p. 222-3. See also § 7, p. 231-2.

the masses by the common means of the State, brought into systematic requisition by the enactment of laws. Internal improvements, therefore, connect themselves in all their incidents with either true or false political economy, and produce benefits corresponding exactly with the degree of sound statesmanship in which measures have their origin.

My present object is to deal principally with the comparatively false political economy connected with the corporate system. Men generally regard the result of *mismanagement* under it as a matter in which the corporator alone is interested. They do not look far enough to observe the extent of its unjust effect on society. Mismanagement, whether under the State or corporate system, will inflict the same injury on the people. Take, for instance, the want of economy in adjustment. If we expend thirty millions of dollars in consequence of local distraction, when the same amount of public accommodation could have been obtained on an outlay of twenty, we shall have thrown away ten millions, on which the interest or dividend is obliged to be paid by productive industry. Any one who will be at the trouble of looking over the location of railways in the United States, will find that two-fifths, or more, of the whole outlay, has been thrown away by the want of proper economy in adjustment. Take the railway charters of Texas, and suppose the roads all built; then, again, see how much better the State could be accommodated with one-half the length of road by a better location merely. Thus much does corporate folly propose to mismanage, and thus much would it require community to pay income on the sacrifice.

The most objectionable kind of mismanagement is that connected with fraud. Take, for instance, the New York and Erie railroad. Fraud was a disease of so long standing with this concern that it became chronic. Without enumerating the nauseating details, we have it from the Railroad Journal, that this company mismanaged its concerns to the amount of thirteen millions in a pretended expenditure of thirty-three; the road being represented by ten millions of stock, and twenty-three millions of bonds, averaging seven per cent. interest. Here, then, thirteen millions are thrown away. The public *should* have been accommodated by paying a fair income on twenty millions, instead of which, productive industry must yield its exactions to pay interest and dividends on thirty-three. In this case we observe that the cost of transportation must be increased so as to pay nine hundred and ten thousand dollars yearly on that which has become a fiction. Over one-third of the business of the road

should be done in connexion with tickets and freight bills headed, "FARE ON FICTION," "FREIGHT ON FICTION," in order to show people how much they have been, and are being, imposed upon by mismanagement and fraud.

Take the Central Railway of New York. This company was formed by the consolidation of several different companies between Albany and Buffalo. After consolidation, instead of graduating the prices for travel and transportation, so as to give a reasonable income on actual investment, ten millions of bonds were issued by the company and divided among the stockholders. This was done in order to evade the statute, and enable the company to draw seven hundred thousand dollars fraudulently from the people to pay the interest on this fiction. The legislature of New York ought to compel this company to head their tickets and freight bills so as to show that about one-third of the aggregate receipts of the road are paid to fiction. It would be the best lesson in political economy New York has had since the old teachers died. Put these operations with the frauds of Schuyler and his associates, and it aggregates the corporate railway fiction of New York to an amount greater than its whole State debt. It demands and receives annual tribute, principally to fraud, to the amount of eighteen hundred thousand dollars. Mercenary speculation, in these arrangements, has been more vigilant and sharp-sighted than popular sagacity. Another reflection also arises. Had one-fifth of this fraud and mismanagement been connected with the State system of New York, what a deafening howl would have come up from every demagogue out of office and who wanted to get in! the newspaper press of the State would have been freighted with complaint sufficient to have sunk the public credit as low as that of Mississippi. But I am talking of things at a distance. Let us home nearer come.

I must now make our friends of the State Gazette responsible for the truth of their publication. In reference to the arrangement by those to whom the Pacific Road contract was awarded, it was alleged that \$200,000 of paid-up stock was to be issued to each; and a further arrangement contemplated by which it was to be increased to \$600,000. I do not recollect the number of contractors, nor how many they designed to associate in this part of the enterprise; nor do I remember whether it would have required ten or twenty millions to have satisfied this offering to corporate patriotism. My only business is with the fact, whether it was contemplated to make exactions upon the productive industry of the country in order to make it yield dividends to the holders. If so, our

people may now review the policy of putting their internal improvements on such a foundation. They can calmly reflect upon a project fraught with such designs, and estimate the soundness of that political economy that would give twenty sections of land to the mile, in order to buy our citizens the privilege of paying dividends on fiction.

There is another kind of false political economy connected with corporate feebleness in finance. This makes unnecessary exactions on community equally injurious as the grossest frauds, but unattended with motives of turpitude. Take, for instance, the small undertaking to connect the waters of Galveston bay with the Brazos river. After expending the money subscribed and paid in, the company resorted to borrowing. Ten per cent. bonds were prepared to the amount of \$80,000, and all but \$13,000, I believe, negotiated at from thirty to sixty cents on the dollar. The canal and improvement, when completed, will have cost nominally _____ dollars. One half of this sum in ready money should have performed the work; and some think the same undertaking could now be completed for one-third of the amount. Thus it will be seen, that, in order to make dividends on this stock, exactions must be strained on produce and merchandise in a two or threefold degree higher than correct political economy would allow them to go. This is but the common penalty which the public sooner or later pays in every instance of corporate feebleness in finance. There are no exceptions.

The San Antonio and Gulf railroad would have afforded a very complete delineation of false political economy, had the project been attended with strength sufficient to have worked out its own illustration. It went far enough, however, in experiment, to allow the balance of the picture to be drawn from fancy. It will be remembered that stock was subscribed to the road upon estimates of \$14,000 to the mile. The directors let the contract at \$27,000. This disparity led to a feeling of discontent, and even accusation of fraud. The explanation to the stockholders and public was, that "as the contractors had agreed to take the bonds of the company in payment, and as they could not be negotiated for over sixty cents on the dollar, it was necessary to make a corresponding allowance in the contract price." Of course this was fair as between the contractors, directors, and stockholders, but what kind of a policy does it disclose for the public to encourage? Here again must produce and merchandise yield *extra* exactions sufficient to pay income on the

sacrifice, amounting to 66 $\frac{3}{4}$ per cent. of the necessary cost of the road.

A short time since, I saw in the Houston Telegraph an article containing some very wholesome advice to the La Grange Convention. The editor assumed that "when times were easy and railroad securities negotiable, a well located road, with a subscription equal to one-half the estimated cost, from which the company had collected instalments and made an expenditure to grade the road and prepare it for the superstructure, would command a loan on its bonds at from seventy-five to ninety cents on the dollar." This, of course, would contemplate an eight, perhaps a ten per cent. bond for Texas. Admitting this statement to be true, let us turn the tables and show how much better economy in finance we *could* adopt, and how much dividends on fiction we *could* exempt our citizens from paying, by the employment of *sound State credit*. I republish, in this connexion, some statements and tables, which appeared in the News Extra in 1852; they were published at that time under the head of "Effect of Constitutional Provisions on the Value of State Bonds."

New York fives, payable in	- 1866	-	-	-	107
New York sixes, payable in	- 1866	-	-	-	123
Ohio fives, payable in	- 1865	-	-	-	103
Ohio sixes, payable in	- 1875	-	-	-	117
Virginia sixes, payable in	- 1886	-	-	-	111
Pennsylvania sixes, payable in	1889	-	-	-	99 $\frac{1}{2}$
Tennessee fives, payable in	- 1880	-	-	-	92
Tennessee sixes, payable in	- 1880	-	-	-	107 $\frac{1}{4}$
Kentucky sixes, payable in	- 1871	-	-	-	109
United States sixes, payable in	1868	-	-	-	119 $\frac{1}{2}$

The above list is from the Stock Exchange table contained in the Railroad Journal of October 23, 1852. By this we observe the New York and Ohio State bonds stand much above the bonds of other States, and those of New York higher than the bonds of the United States. New York fives commanded a premium of 7 per cent. ; Ohio fives 3 per cent. ; whilst the Tennessee fives are depressed to a discount of eight cents on the dollar.

New York sixes command a premium of 23 per cent. ; those of Ohio, 17 ; Virginia, 11 ; Kentucky, 9, ; Tennessee, 7 $\frac{1}{4}$; whilst those of Pennsylvania stand at a discount. New York and Ohio have constitutional provisions regulating the contraction of public debt, and providing for the certain payment of principal and interest. Such are these provisions, that the credit of those States is placed on a sure

basis, and is approaching the highest degree of confidence attainable. Ohio was somewhat later than New York in adopting these provisions in her constitution, but the effect is already apparent in the growing confidence of the public creditor.

Compared with Pennsylvania, the New York bond has the advantage of 23½ cents on the dollar, though it has less time to run by thirteen years. Compared with that of Virginia it has 12 cents advantage on the dollar, though it has less time to run by twenty years, and would exceed it by a much greater difference of premium were its payment, like that of the Virginia bond, extended to 1886.

Let us now compare State bonds with railroad bonds issued by companies. We will take the soundest State bonds and the best railroad bonds; for we can obtain but little satisfactory information from the comparison of unsound things. We can never estimate the true value of things by degrees of rottenness. We will, therefore, take only those bonds which stand highest on the list of Stock Exchanges:

Erie, first mortgage, 7 per cent.	-	-	-	-	113
Erie, second mortgage, 7 per cent.	-	-	-	-	104
Erie income 7 per cent.	-	-	-	-	98
Erie convertible bonds 7 per cent.	-	-	-	-	96½
Hudson river, first mortgage, 7 per cent.	-	-	-	-	100½
Hudson river, second mortgage, 7 per cent.	-	-	-	-	89½
Reading sixes, payable in 1870	-	-	-	-	89½
Reading mortgage sixes	-	-	-	-	94½
New York and New Haven, 7 per cent.	-	-	-	-	106½
Michigan, Central, 8 per cent.	-	-	-	-	110
Michigan, Southern	-	-	-	-	100½
Cleveland, Columbus, and Cincinnati, 7 per cent.	-	-	-	-	114
Cleveland and Pittsburg 7 per cent.	-	-	-	-	102
Ohio and Pennsylvania 7 per cent.	-	-	-	-	104½
Ohio Central 7 per cent.	-	-	-	-	96

The difference in value between a New York State bond bearing 5 per cent. and one bearing 6 per cent. is sixteen cents on the dollar. A 5 per cent. bond is worth \$1 07; the 6 per cent. \$1 23. The premium of a New York 7 per cent. bond, having fourteen years to run, is thirty-nine cents on the dollar. It has an advantage *on the dollar* over the bonds in the above list, as follows:

	Cents.
Erie, first mortgage	62
Erie, second mortgage	53
Erie income	41
Erie convertible bonds	42½

Hudson river, first mortgage	-	-	-	-	-	39
Hudson river, second mortgage	-	-	-	-	-	50
Reading sixes	-	-	-	-	-	33½
Reading mortgage sixes	-	-	-	-	-	28½
New York and New Haven	-	-	-	-	-	32½
Michigan Central	-	-	-	-	-	45
Michigan Southern	-	-	-	-	-	38½
Cleveland, Columbus, and Cincinnati	-	-	-	-	-	25
Cleveland and Pittsburg	-	-	-	-	-	37
Ohio and Pennsylvania	-	-	-	-	-	34½
Ohio Central	-	-	-	-	-	43

The above schedule of comparative values would seem to show the difference between sound State credit and corporation credit in the construction of internal improvements.

Let the reader now compare the 7 per cent. New York bond with the best railway bond capable of being made. It stands above the Erie first mortgage 26 cents on the dollar. Compared with the San Antonio railway bond, it would stand as *one dollar and thirty-nine cents to sixty cents*. Compared with a Houston company bond, probably about the same. Now make allowance for the addition which 7 per cent. would give to the respective bonds of the other States. Compare them also. A little careful study and reflection on this branch of the subject will show what may be accomplished in the comparison by the employment of sound State credit. That credit may become just what a people may be disposed to make it. If it is made what it is capable of being made under correct statesmanship, it will possess, on the average, forty cents on the dollar advantage over the best classes of corporate credit; and about the same amount better than *cash*, where the customary rate of interest is 7 per cent. In a State like Texas, it would make more than one half difference on the original outlay, and consequently the same difference in the sustaining exactions, from year to year, necessary to be drawn from productive industry to sustain the improvements.

Let us look a little, in this connexion, at the difference in cost of transportation on the State and corporate works of New York. It stands as *two dollars to five dollars* a ton per hundred miles. Now, put the *fiction* of these roads mentioned with the advantage of thirty-nine cents on the dollar, which the 7 per cent. State bonds have over *cash*, and a school boy can begin to see what makes the difference in cost of transportation. It saved the people twelve millions last year. It was said in the Austin convention, three years ago, or by some one in reference to its proceedings, that "it would

be a perfect millenium in Texas when we could get transportation for four New York prices." This remark was made in connexion with estimates to sustain the Houston road, and in which it was proposed to tax produce and merchandise in its transit something below ox team transportation. We want no such millenium. We want to save enough out of *that* proposition to bring up the children and educate them, and to learn them to cypher, far enough at least, to calculate dividends on fiction.

There are a few suggestions, in connexion with this subject, I would here take occasion to make. The Edinburg Review, under the head of "Railway Morals and Railway Policy," presents, perhaps, as nauseous a picture of corporate immorality and mismanagement as need be drawn. "It has been shown," says the Review, "that in past years parliamentary expenses (lobbying for paid up stock, of course,) have varied from six hundred and fifty to three thousand pounds per mile, of which a large proportion has gone into the pockets of the profession." "In one contest fifty-seven thousand pounds was spent among six counsel and twenty solicitors. At a late meeting of one of our companies it was pointed out that the sum expended in legal and parliamentary expenses, during nine years, had reached four hundred and eighty thousand pounds," or almost two millions and three hundred and fifty thousand dollars. It is remarked in another place: "We hesitate not to assert, that if there had been less cupidity in the shareholders, and an honest regard for the good of the property, there would scarcely be a trunk line in the kingdom which would pay less than 10 per cent., and many of them would reach 15 or 20 per cent. The fact is, the whole system of railways has been vicious from first to last. Parliament has acted badly, the government has done the same, and has given up railways to the plunder of big wigs, (lawyers,) engineers, contractors, and land owners; the directors have been reckless, and the shareholders seized with insatiable cupidity for premiums, and jobbing in shares. Had railways been managed with anything like commercial prudence, they would have been the finest and safest property for investment." The whole exhibition of the Review, taken together, would confirm one in the belief that about one-third of the expenditure on English railways had been virtually thrown away, and was never embraced in the legitimate disbursement to pay construction account. The Railroad Journal, of New York, in alluding to the subject of these complaints, says: "But whatever the causes of the disasters which have befallen British railroads, involving a loss, vari-

ously estimated at from three hundred and fifty to five hundred millions of dollars, equal to one-half or two-thirds of the whole expenditures upon such works in this country, the *fact* stares us fully in the face. Are our roads in a similar category? Is the vice from which the former have suffered inherent in the system, or peculiar to one country?" *Well* has this question been put, and well should it be answered. What most surprises me is, that the question seems to be regarded entirely as one between those personally identified with the railways. Whilst a few individuals, compared with the masses, have been made the victims of fraud, and a few more have been engaged in perpetrating it, these two classes have received the entire sympathies and execrations of these journalists. The people seem never to have been thought of. The great question of DIVIDENDS ON FICTION, drawn from productive industry, seems to have been entirely overlooked. They have avoided the real question in political economy, and only taken the division of plunder into the account. When will the statesman and political economist sufficiently learn that THERE IS ALWAYS A PEOPLE?

The question here naturally arises, "Are we yet prepared for the adoption of the State system in Texas?" My answer to this question would be, "No." Not, however, from the want of resources, nor want of population, nor from incapacity to make and establish an adequate basis for public credit. Our people, as a whole, have not as yet sufficiently educated themselves on the subject of internal improvements. They are barely and but temporarily fortified against the repetition of that delusion which has swept over the land, and left our politicians looking very queer. The State system involves and requires the highest and purest principles of statesmanship known to humanity. It requires the combination of intelligence, good sense, and patriotism, all directed carefully to the subject. The man who has never made the profession of law his study is just as competent to practice law as the man is fitted to speak or act on the subject of internal improvements who has never made that his study; not that it requires the same length of time to master the one as the other, for the candid, careful, and ingenuous mind will in a little time, with proper assistance, be enabled to comprehend clearly the whole principles and details of both the State and corporate systems. There is more accurate knowledge now afloat in Texas on this subject than in any State in the Union, in proportion to our population. And why is it? The teachings of the great teachers on this subject, but who are now in their graves, have been perseveringly promulgated within

the last three years. Awkward as may have been the delineations, they have set our citizens to thinking, investigating, and analyzing, until now a large class see the way clear in favor of the State system. They now discover its justice and power, in comparison with which the corporate system, with its speculating foundation and dirty tricks, appears contemptible. They are beginning to have a very proper aversion to the payment of DIVIDENDS ON FICTION. We have barely entered, however, on the threshold of profitable agitation and discussion. As soon as sound internal improvement education can be carried far enough will our citizens be prepared to adopt the State system with success. The best intellects in the State, or in the United States, however, are incompetent to comprehend the subject by intuition. They must investigate. If they investigate with an eye steady to the interests of the State, they will have no difficulty. If the feeling of narrow-minded locality comes uppermost, it will unfit them for both reason and proper action.

But again: can we stand where we are? Distressed by sacrifices, could our citizens be kept from making the effort to relieve themselves from their present condition? They all agree that railroads is the only basis of relief, therefore we are compelled into the adoption of some system, whether it be a true or false one, a wise and powerful or a vitiated and weak one. Any one who has looked over the State, and duly reflected on the subject, ought to know that locality has no strength sufficient to accommodate itself. If we cannot agree upon a reasonable schedule of roads, both as to amount and location, if we cannot agree upon a financial basis and system in connexion under which to construct them, divested of all false political economy, we shall remain powerless, as heretofore, to do anything. We will be obliged to adopt a system that shall be wisely and judiciously planned, perfected, and secured against failure, one that shall command confidence at home and respectability abroad, or we cannot command credit or means to carry it out. If any other is attempted, the present advocates of the State system, I trust, will be the first to discover its defects and to oppose it. Nothing but the most perfect statesmanship will answer the purpose, and our whole people should be made to know it and to understand it; that sections may set the example to sections to act sensibly and rationally. We have no chance for relief upon any other basis. We have resources capable of being multiplied by good management, sufficient to make the State and every part of it well off; but if we continue to act without concert and system, we shall remain nearly where we are ten years hence.

LORENZO SHERWOOD.

THE PROVINCE OF EDUCATION.

Wm. Gilmore Simms, than whom the south has no son more distinguished in literature and scholarship, nor wider known for authorship throughout the republic, in an address delivered at Spartanburg, South Carolina, thus discourses of education. The elevation of Mr. Simms by his native State to any high post of honor and responsibility would be hailed by scholars everywhere as a well-earned tribute to talent and worth, like the appointment of Mr. Irving to Spain, or that of Mr. Bancroft to England.

I have, my friends, just returned from a visit to your own glorious mountain region of the Apalachian, and this journey, by the way, must furnish my apology for the shortcomings of this oration, must plead to you for its imperfections, as it must certainly fail equally to meet your expectations and my own standard. * * * * * And, as I gazed, a mighty image arose before my soul's vision, and I beheld the mysterious author, Nature herself, throned in her tangled sovereignty of waste—wild torrents roaring around her; great winds swaying her solemn forests into music, the tumults of which, while they raised the choir of storm into sublimity, did not impair its awful symphonies. These were her voices—voices of moaning and complaint; for in all her grandeur there was gloom, and the desolation of her State rendered valueless all her profligate wilderness of wealth. Her voices of cataract and storm were calling upon *art* for succor and deliverance. She was imploring man—he to whom all her empire was decreed—to come to her assistance. He alone could open the pathways to her empire and make it fruitful. She needed his pioneer to trace out the avenue to her grand abodes; to grade the summits; to span the gulfs with his arches; to render safe the march along her stupendous precipices; she needed his industry to lay bare the tangled wastes of valley beneath her heights, and to clothe their bosoms in yellow harvests, ripening in a generous sun, for the scythe of autumn. She demanded of him the art which should strew her highway with flowers; which should make her crags blossom with the rose; which should crown her ledges with noble architecture; which should raise her statues of living marble out of the massed stolidity of her now cold and silent rocks. Melancholy in her glorious solitude, gloomy in all her grandeur. Nature was thus crying out everywhere for the succor and help of man—for that culture of art which should soothe with the sweets of beauty her dark, and terrible, and sterile aspects.

And thus, in the same sterile, irregular, tangled condition—a wild sovereignty of gloom and thicket—the great soul of humanity cries aloud to education for her rescue.

AGRICULTURAL AND HORTICULTURAL JOURNAL.

AGRICULTURE IN ALL AGES.

No. I.*

I shall in the present article limit myself to a brief historical sketch of agriculture, which became one of the sustaining arts of life as soon as man was ordained to earn his bread by the sweat of his brow. In the garden of Eden, whose fertile soil and genial clime appear to have combined in maturing a continued variety and unflinching succession of vegetable sustenance, agricultural operations were unknown; for that which came spontaneously to perfection required no assistance from human ingenuity; and where there is no deficiency there can be no inducement to strive for improvement. That period of perfection was but transitory; and the Deity that had placed man in the garden "to dress it and keep it," eventually drove him thence "to till the earth from whence he was taken." (*Gen. ii. 15; iii. 23.*)

From that time to the present, agriculture has been an improving art; and there is no reason to doubt but that it will go on advancing as long as mankind continues to increase.

Man, in his greatest state of ignorance, is always found dependent for subsistence upon the produce of the chase; but, as population increases, recourse must be had to other sources of food. And we find in the shepherd's life of the early ages, the first step to agricultural art, the domestication of animals, which it was found to be more convenient to have constantly at hand, rather than to have to seek precariously at the very time they were required. As the increase of population still went on, and the flocks and the herds had proportionately to be enlarged, one favorite spot would be found too small for the subsistence of the whole; and, as in the case of Abraham and Lot, they would have to separate and find pasturage in different districts. This separation into tribes could not proceed beyond a certain extent; and when the land was fully occupied, recourse would by necessity be had to means of increasing the produce of given surfaces of soil instead of enlarging their extent. With Abraham and Isaac it is very evident that wheat and the other fruits of the earth were the rare and choice things of their country; but when such nations once learned, as they might from the example of Egypt, the resource such products were in periods of famine, arising from mortalities among their cattle, they would soon pursue their interests by cultivating them. This completed, the acquirement of property in land for the space not only long occupied, but upon which the occupier had bestowed his labor, built his habitation, and had enclosed from injury by vagrant animals, would be acknowledged to be his without any one stopping to inquire what right he had to make the enclosure.

When once thus located, experience and observation would soon teach the employment of manures, irrigation, times of sowing, and other necessary operations; and every generation would be wiser in the art than that which preceded it. This especially has occurred in these more northern climates, where art and industry has to compensate for a deficiency of natural advantages. "Enlarging numbers," observes Mr. Sharon Turner, "only magnify the effect; for mankind seem to thrive and civilize in proportion as they multiply; and, by a recurrent action, to multiply again in proportion as they civilize and prosper." In this manner improved modes of cultivation, the introduction of new species, and of more fruitful varieties of agricultural produce, have universally kept pace with an increasing population. This, resting upon a basis of facts, vindicates the wisdom of Provi-

* From Johnson's *Farmers' Encyclopædia*.

dence, and refutes Mr. Malthus's superficial theory of over-production. The agricultural produce of England has gradually increased from the insignificant amount that was its value in the time of the Roman invasion, to the enormous annual return of £200,000,000; and it is very certain that in this country, and much more in other parts of the world, the produce is a mere fraction of what the total soil is capable of returning.

Agriculture is the art of obtaining from the earth food for the sustenance of man and his domestic animals; and the perfection of the art is to obtain the greatest possible produce at the smallest possible expense. Upon the importance of the art, it is needless, therefore, to insist; for by it every country is enabled to support in comfort an abundant population. On this its strength as a nation depends; and by it its independence is secured. An agricultural country has within itself the necessaries and comforts of life; and, to defend these, there will never be wanting a host of patriot soldiers.

Of the pleasure attending the judicious cultivation of the soil, we have the evidence of facts. The villa farms sprinkled throughout our happy land, the establishments of Holkham, Woburn, &c., would never have been formed if the occupation connected with them was not delightful. We have an unexceptionable witness to the same fact in the late Mr. Roscoe, the elegant, talented author of the Lives of Lorenzo de Medici and of Leo the Tenth. Mr. Roscoe was the son of an extensive potato grower, near Liverpool. In the cultivation of that and other farm produce, he had been an active laborer; and he who thus had enjoyed the delights that spring from literary pursuits, and from the cultivation of the soil, has left this recorded opinion: "If I was asked whom I consider to be the happiest of the human race, I should answer, those who cultivate the earth by their own hands."

We have but little information to guide us as to the country in which man first cultivated the soil; nor of that in which he first settled after the deluge. Thus much, however, is certain, that we have the earliest authentic account of the state of agriculture as it existed among the Egyptians and their bond-servants, the Israelites. From the former, probably the Greeks were descended. The Romans, at a later period, were a colony from Greece; and from the Romans the other countries of Europe derived their earliest marked improvement in the arts.

Our brief history of the progress of agriculture, then, will be divided into—
1. The agriculture of the Egyptians and other eastern nations; 2. The agriculture of the Greeks; 3. The agriculture of the Romans; 4. The agriculture of the Britons, including a cursory notice of its present state among the chief nations of Europe.

I. THE AGRICULTURE OF THE EGYPTIANS, ISRAELITES, AND OTHER EARLY EASTERN NATIONS.—Every family of these primitive nations had its appointed district for pasturage, if it pursued a pastoral life; or its allotted enclosure, if it was occupied by tilling the earth. There was no distinction in this respect between the monarch and his people: each had a certain space of land from which he and his family were to derive their subsistence.

The Egyptians, as well as the Israelites, were flock-masters. The latter were particularly so; and, as Joseph's brethren said to Pharaoh, "their trade was about cattle from their youth." (*Gen. xlv. 3.*) When, therefore, they came into Egypt, they desired the low-lying land of Goshen, as producing the most perennial of pasture. (*Gen. xlvii. 4.*) It is true that the same authority says, "Every shepherd is an abomination unto the Egyptians; but this was because, about a century before the arrival of Joseph among them, a tribe of Cushite shepherds from Arabia had conquered their nation, and held them in slavery; till, after a sanguinary contest of thirty years, they regained their liberty, about twenty-seven years before Joseph was promoted by Pharaoh. That the Egyptians were flock-masters is certain, from many parts of the Scriptures. Thus, when Pharaoh gave permission to the Israelites to dwell in Goshen, he added, as he spoke to Joseph, "And if thou knowest any men of activity among them, then make them rulers over my cattle," (*Gen. xlvii. 6.*) and when the murrain came into Egypt, it was upon their horses, asses, camels, oxen, and sheep. (*Exod. ix. 3.*)

The attention and care necessary to be paid to their domestic animals were evidently well known and attended to; for, when they proposed to settle in a land, their first thought was to build "sheepfolds for their cattle." (*Numb. xxxii. 16.*) They had stalls for their oxen, (*Hab. iii. 17.*) and for all their beasts. Thus King Hezekiah is said to have made "stalls for all manner of beasts, and cotes for

flocks; moreover, he provided him possessions of flocks and herds in abundance," (2 Chron. xxxii, 28;) and that this abundance exceeded the possessions of the greatest of our modern flock-masters, we may readily acknowledge, when we read that, "Mesha, king of Moab, was a sheep-master, and rendered unto the king of Israel 100,000 lambs, and 100,000 rams, with the wool." (2 Kings, iii, 4.)

They prepared the provender for their horses and asses of chaff, or cut straw and barley. (Judges, xix, 21; 1 Kings, iv, 28.) Our translation does not explicitly state this, but it is clear in the Hebrew original. (Dr. Kennicott's xxivth Codex; Harmer's Observations, i, 423.) It is also certain from the Hebrew original, that they tied up calves and bullocks for the purpose of fattening them, (Jerem. xlvi, 21; Amos, vi, 4, &c.; Parkhurst's Hebrew Lexicon, 673;) and that they were acquainted with the arts of the dairy. "Surely the churning of milk," says Solomon, "bringeth forth butter," (Prov. xxx, 31;) and Samuel speaks of the "cheese of kine," (2 Sam. xxvii, 29.) The chief vegetable products cultivated by these eastern nations were wheat, barley, beans, lentils, rye, the olive, and the vine. (Exod. ix, 31; Levit. xix, 10; 2 Sam. xvii, 28, &c.)

The scanty notices which we have of their tillage, give us no reason to doubt that they were skilful husbandmen. The name for tillage (*Obed*) emphatically expresses their idea of it; for it literally means to *serve the ground*. (Parkhurst, 508.) And that the cares and attention necessary were well sustained, is evidenced by the fact that David, for his extensive estate, had an overseer for the storehouses in the fields; another over the tillage of the ground; a third over the vineyards; a fourth over the olive-trees; two to superintend his herds; a seventh over his camels; an eighth to superintend his flocks; and a ninth to attend similarly to the asses. (1 Chron. xxvii, 25—31.)

Of their ploughing, we know that they turned up the soil in ridges, similarly to our own practice; for the Hebrew name of a husbandman signifies a man who does so. (Parkhurst, 93.) That they ploughed with two beasts of the same species attached abreast to the plough. (Deut. xxii, 10.) That the yoke, or collar, was fastened to the neck of the animal; and that the plough, in its mode of drawing the furrows, resembled our own; for we read of their sharpening the coulter and the ploughshare. (Sam. xiii, 20, &c.) Ploughing was an operation that they were aware might be beneficially performed at all seasons; for Solomon mentions it as a symptom of a sluggard, that he will not plough in the winter, (Prov. xx, 4;) and that too much care could not be devoted to it, they expressed, by deriving their name for ploughing from a Hebrew root, which signifies *silent thought and attention*. (Parkhurst, 244.)

Their sowing was broadcast, from a basket, (Amos, xi, 13; Psalm cxxvi, 6;) and they gave the land a second superficial ploughing to cover the seed. It is true that harrowing is mentioned in our translation, (Job, xxxix, 10;) but Schulzens and other Hebraists agree that harrowing was not practised by them. Russell, in remarking upon the mode of cultivation now practised near Aleppo, says: "No harrow is used, but the ground is ploughed a second time after it is sown, to cover the grain." (Parkhurst, 720.)

The after-cultivation apparently was not neglected; they had hoes or mattocks, which they employed for extirpating injurious plants. "On all hills," says the prophet, "that shall be digged with the mattock, there shall not come thither the fear of briers and thorns." (Isa. vii, 25.) In those hot climates a plentiful supply of moisture was necessary for a healthful vegetation; and the simile of desolation, employed by the same prophet, is "a garden that hath no water." (Isa. i, 30.) In Egypt they irrigated their lands; and the water thus supplied to them was raised by a hydraulic machine, worked by men in the same manner as the modern tread-wheel. To this practice Moses alludes when he reminds the Israelites of their sowing their seed in Egypt, and watering it with their feet, a practice still pursued in Arabia. (Deut. xi, 10; Niebuhr, Voyage en Arabie, i, 121.)

When the corn was ripe, it was cut with either a sickle or a scythe, (Jer. i, 16; Joel, iii, 13,) was bound into sheaves, (Psalm cxxix, 7; Deut. xxiv, 19, &c.) and was conveyed in carts, (Amos, ii, 13,) either immediately to the threshing-floor or to the barn. They never formed it into stacks as we do. These passages in the Scriptures (Exod. xxii, 6; Judg. xv, 5; Job, v, 26) refer exclusively to the thraves or shocks in which the sheaves are reared as they are cut. (Harmer's Observ. iv, 145, &c.) The threshing-floors, as they are at the present day, were evidently level plats of ground in the open air. (Judg. vi, 37; 2 Sam. xxiv, 18—25, &c.) They were so placed that the wind might, at the time of the opera-

tion, remove the chief part of the chaff. They, perhaps, had threshing-floors under cover, to be used in the inclement seasons; for Hosea, (ii, 35,) speaking of "the summer threshing-floors," justifies such surmise. The instruments and modes of threshing were various. They are all mentioned in these two verses of the prophet: "Fitches are not threshed with a threshing instrument, neither is a cart-wheel turned upon the cummin, but the fitches are beaten out with a staff, and the cummin with a rod. Bread-corn is bruised because he will not ever be threshing it, nor break it with the wheel of his cart, nor bruise it with his horsemen." (*Isaiah*, xxviii, 27, 28.) When the seed was threshed by horses, they were ridden by men; and when by cattle, although forbidden to be muzzled, (*Deut.* xxv, 4,) yet they were evidently taught to perform the labor. (*Hosea* x, 11.) The "instrument" was a kind of sledge, made of thick boards, and furnished underneath with teeth of iron. (*Isaiah*, xli, 15; *Parkhurst*, 242, 412.) The revolving wheels of a cart, and the various-sized poles employed for the same purpose, need no further comment. To complete the dressing of the corn, it was passed through a sieve, (*Amos*, ix, 9,) and thrown up against the wind by means of a shovel. The fan was, and is still, unknown to the eastern husbandmen; and where that word is employed in our translation of the Scriptures, the original seems to intend either the wind or the shovel. (*Isaiah*, xxx, 24; *Jer.* xv, 7; *Parkhurst*, 183, 689.)

Of their knowledge of manures we know little. Wood was so scarce that they consumed the dung of their animals for fuel. (*Parkhurst*, 764.) Perhaps it was this deficiency of carbonaceous matters for their lands that makes an attention to fallowing so strictly enjoined. (*Levit.* xix, 23; xxv, 3; *Hosea*, x, 12, &c.)

The landed estates were large, both of the kings and some of their subjects; for we read that Uzziah, king of Judah, "had much both in the low country and in the plains; husbandmen, also, and vine-dressers in the mountains and in Carmel, for he loved husbandry," (2 *Chron.* xxvi, 10;) that Elijah found Elisha with twelve yoke of oxen at plough, himself being with the twelfth yoke, (1 *Kings*, xix, 19;) and that Job, the greatest man of the east, had 14,000 sheep, 6,000 camels, 1,000 yoke of oxen, and 1,000 she-asses. (*Job*, i, 3; xlii, 12.) In the time of Isaiah, the accumulation of landed property in the hands of a few proprietors was so much on the increase, that a curse was uttered against this engrossment. "Wo unto them," says the prophet, "that join house to house, that lay field to field, till there be no place, that they may be placed alone in the midst of the earth." (*Isaiah*, v, 8.)

THE SWEET AND THE IRISH POTATO.*

SWEET POTATO—*BATATUS EDULIS*.—The esteem in which the sweet potato is held may be estimated by the extent to which it is produced, 4,742,000 bushels, worth more than two millions and a quarter of dollars, being the crop of Mississippi of 1849.

In the production of this esculent, Mississippi ranks fourth among the States of the Union; Georgia, North Carolina, and Alabama only excelling her.

Five varieties are cultivated with us, which will be mentioned in the order of their excellence, as generally estimated. First in quality, as in extent of cultivation, stands the Yam, which, if surpassed by some in average size, is approached by but one in delicacy of flavor. Its shape is oval or roundish, with a smooth exterior, and yellowish tint. It is as prolific as any other, and keeps remarkably well.

The next in place is the Spanish, or White potato; it is long and crooked, with large veins or nerves running lengthwise on the exterior, by which it is universally characterized. Another characteristic which distinguishes it from all others, is an aptitude of the flesh, or meat, if I may so designate it, when cooked, to divide or separate in layers or flakes lengthwise, the fibre at the same time being destitute of any stringy property.

Early in the season, it is rather too milky to suit the taste of many, but when thoroughly cured, it becomes very sweet and rich, differing somewhat in flavor

* From Wailes' Agricultural Report of Mississippi. Every planter in the South should procure this work, published by Lippincott & Co., of Philadelphia, 1855.

from the yam. It grows to a large size, and singularly enough, notwithstanding its excellence, it seems to be greatly neglected of late, and is not now often met with.

The Bermuda potato has a deep crimson or purple skin; but the interior is very white. In form, it is more cylindrical than the yam, somewhat elongated, and is regarded by some as the largest and most prolific variety. Its flavor, however, is coarse and flat.

The Red is the earliest variety introduced here. It was formerly very generally cultivated; it is inferior to the foregoing in size, and not now very much in use.

It is rather dry and mealy, and is best early in the season, when newly dug, and it is perhaps the earliest to mature.

The Poplar Root, which somewhat resembles the yam in outward appearance, but not generally so round, with a smooth skin, and the color rather a deeper yellow, was introduced ten or fifteen years since with high commendations. It proved a watery, insipid kind, however, and is now generally banished.

Up to the period of 1810 or 1815, the yam potato was rarely seen; the old red and white Spanish being altogether cultivated—the former much the more extensively.

The Bermuda is the most recent introduction.

All the varieties of the sweet potato succeed best in a loose sandy soil, although the yam is said to flourish in the prairies of the eastern counties. I have seen one of that variety raised near Macon, which weighed ten pounds.

The proper time for planting is about the first of April, and the most approved mode of raising the yam is to *spread* the small roots or potato plantings on a rich bed about the first of March, covering them with three or four inches of loose rich soil. When the sprouts make their appearance above the surface, they are drawn and set out in newly-made ridges after or during a rain.

These beds continue to throw out a succession of sprouts, which may be planted every favorable season as late as the first of August, and if well worked, and the weather be not too dry, will make good potatoes. It is said the red potato does not succeed so well when planted in this way.

At some seasons the sweet potato is sufficiently matured for early use by the first of September; but it is attended with great waste to commence on them so soon, as it is thought the tubers grow more in October after the vine begins to decline than before.

The best time for digging potatoes is the first good dry mild weather succeeding the first frost that kills the vines. They are then better *ripened*, freer from water or sap, and consequently keep better. They should not be suffered to remain undug until the ground freezes, as they will become frostbitten and rot.

The most approved mode of preserving the sweet potato is to place them in piles or heaps of about twenty-five bushels each, on raised ground, with a flooring of cornstalks and straw, the sides being lined with the same material, the whole covered with three or four inches of earth or sod, a small aperture being left near the apex of the cone for the escape of the moisture which passes off from the potato when undergoing the sweat, which always takes place soon after they are placed in bulk.

Put up properly in this way, they will keep perfectly sound and sweet until June or even later.

The potato *patch* affords a good gleaning to the fattening hogs, which are usually turned upon it, and find in the small tubers, cut and waste potatoes, a favorite food, on which they thrive rapidly, and is a good preparation for after feeding on corn in the close pen.

Some planters put in a large crop of sweet potatoes for this purpose, and when corn is scarce give no other food. The meat is said, however, to be less firm, and the lard more oily, than that of the corn-fattened hog.

THE IRISH POTATO—SOLANUM TUBEROSUM.—The Irish potato is not extensively cultivated, and seldom beyond the limits of the garden.

Two varieties—the Meshanic and the Purple Eye—are those which seem to be the most approved, the red being rarely planted, under the common belief that the white varieties succeed the best. For what we do plant we are dependent every year almost entirely on those brought down the Mississippi from the Western States.

A course embracing the planting, cultivation, and after treatment, which ha

been tested many years, may be confidently recommended as one attended with much success.

In suitable weather, soon after the first of January, on the even, clean, but unbroken *surface* of the ground appropriated for the purpose, place the cuttings, with the eye upwards, three inches apart, in rows two feet distant from each other. Cover *well* with light rich vegetable compost. Well rotted corn-blades, straw, or leaves from the woods, are well suited for this purpose. Draw over this a moderate ridge of earth. As soon as the tops show themselves generally above the surface, an inch or two high, ridge up with earth, again covering the top entirely, and repeat this in ten days or so, when the tops appear the second time. This will give a ridge of sufficient size, and *completes* the cultivation.

About the middle of April the potatoes are fit for use, and are to be dug daily, as required.

About the first of June, especially if the season be dry, the tops begin to fail and gradually die; the grass and weeds which spring up between the rows must not afterwards by any means be removed; otherwise, when deprived of the shade afforded by the top, the potato will become partially scorched or baked in the ground by the intense summer heat, which makes them watery, and causes them to rot. Protected by the grass and weeds, they remain fresh and sound, and will keep in excellent condition until frost.

It is generally conceded that the Irish potato cannot in our climate be kept through the summer out of the ground. For this reason, and possessing no value for stock, together with the preference which most southerners give to the sweet potato, it is not more cultivated.

The crop of 1849 was about 260,000 bushels.

There is a considerable consumption of the Irish potato in our cities and towns convenient to the river, which are obtained from the Western States, at a price much below what they can be produced for here.

ECONOMY IN FARMING.*

MR. EDITOR: I observe in the July issue of your valuable journal an article on economic cultivation, which ought to be set in letters of gold. No farmer of common observation but will admit its truth, but still there is that early training, those scenes of our boyhood, the veneration for our fathers who cultivated the same fields—these cling to us in our after lives.

But all things are changeable, and so with the soil; it behooves us to look about us when we can see the lee shore in the distance, and hear the low sound of the breakers as they dash on the shore. The present high price of labor and diminished crops will hardly balance the sheet. We have known men the past season not able to cut more than three hundred of hay per day. Value of hay, \$2 50. Labor, \$1 75. Profit to the land of 75 cents on one day's work. You may say this will do very well; but, brother farmers, we will show you another picture. By another system of cultivation a man will cut and house one ton of hay per day; estimate labor, \$1 75; value of hay, \$15; leaving a profit to land of \$13 25; difference between the two systems, \$12 50. So much is the difference in two days' labor.

But this is only a small item in a farmer's book. There are other crops as important as hay. We take, for instance, Indian corn. Many farmers make no more than twenty or twenty-five bushels per acre, and some, we are sorry to say, do not do that. The cost of working the crop, the land, &c., as labor is now, will not fall much short of \$20. Estimate price of corn at \$1 per bushel, \$25; fodder, \$5; making \$30; leaving \$10 to the land. In the making of this crop, the value of the land is diminished rather than increased for succeeding crops.

Fifty bushels of corn can be made with ease by good cultivation at the north per acre. Cost of cultivation, land, &c., \$32; corn, \$50; fodder, \$10; leaving \$23 as profit to the land. A difference between the two systems of \$18 on one acre of land. This is quite a return for an extra outlay of \$12. Now these are stubborn facts that will surely look the farmer in the face at the end of each year: but these are only two of the leaks in the farmer's ship. Many suppose that a

* From the Plough, the Loom, and the Anvil.

farmer's thrift is told by the number of his half-fed animals about his yards. A grand mistake. Our motto should be, in this respect, more profit on one full-fed animal than two half fed, which will be found by balancing accounts.

The earth is formed of atoms. So by taking care of small things, we make a large pile in the end. The droppings of a single ox once is a matter, you might say, of small consequence; but if repeated six times in twenty-four hours we get 1,990 in a year—quite a pile. This being carefully composted with sods by the wayside, or mud from the swamp, rich in vegetable matter, and being combined with gasses, will produce four ears of corn for each dropping, making 7,960 ears of corn at 230 ears per bushel, or 34½ bushels of shelled corn, and the land left in better condition for succeeding crops.

But perhaps, after all that may be said, that the waste of manure, and the injudicious application of the same to the soil, is the largest leak in the farmer's ship, and would end in a failure in most other pursuits.

A few days' extra labor in dull weather in the collection of turf, mud, and in fact, the waste of all things that are lying waste about almost all farms, would add largely to the amount of our stock of manure, and cover our fields with a bountiful harvest. This crop, judiciously spent, will place us in a situation to make another equally as good. Now, the greatest thing we want is to make one good crop, and after, if it is well spent, we can keep along. Our theory is, that the change of one plant will produce another.

D. L. HARVEY.

EPPING, August 6.

EDUCATION OF FARMERS.*

The notions are becoming obsolete that the cultivation of the mind and the cultivation of the soil are antagonistic, and that education is due only to "the professions."

It belongs to our strong-minded farmers to work a still greater reform in their midst. As improvements are made in agriculture, it becomes necessary, if a farmer would take respectable rank in his class, that he should be intelligent upon subjects relating to his department of industry; for the belief is becoming more popular every day, that the farmer who has his mind well stored is pretty sure to have his barns well stored also. This belief, perhaps, more than any other cause, has aided in carrying the weekly and monthly periodical to the country fireside, and made sale for thousands of volumes on agricultural science.

As a thirst for knowledge increases with its gratification, study and research in one department of science naturally creates a desire to extend the range. If farmers will encourage such desires in their children, mental culture and refinement will be found to adorn the social circle in the country as well as in the city. Indeed, there is no class more favorably circumstanced than the agricultural for enjoying the true pleasures which general intelligence affords. With homes of taste where they might enjoy their hours of repose, with companionship that elevates and refines, the sons of the farmer would not think their dignity and respectability increased by being permitted to stand behind a city counter measuring laces and silks.

It is quite common for complaints to be uttered, that country people do not hold the position which they ought; that they are looked down upon by other classes. For this farmers are themselves responsible to a great extent. Let them manifest as much zeal and care upon the improvement of their families as they do upon their blooded stock; let not the poetry of life be all crushed by sweat and toil; let them give liberal patronage to literary and scientific institutions; then will the wealth which an intelligent understanding of the principles of agriculture brings, and the power which knowledge gives, place the farming class where no derogatory comparisons can, with truth, be offered.

The discoveries of the last few years have elevated agriculture almost into the rank of exact sciences. Certain conditions being given, the intelligent farmer knows precisely what to do in order to accomplish desired results. Proofs of the advantages which such enjoy may be deduced from the many letters which are

* From the Plough, the Loom, and the Anvil.

daily published, written from various parts of the country, asking for information concerning the treatment of lands, &c. Did the writers of many of these letters possess, in connexion with their practical skill, a knowledge of the organized sciences and their handmaid, chemistry, they would be capable of giving the information sought instead of asking it.

The great principle upon which scientific agriculture is based, is this "Not a particle of matter can be created, not a particle can be lost." It is on this principle that manures are applied to soil, that crops are varied, that old and exhausted lands are renovated.

But the economical and intelligent husbandman has no exhausted fields. He knows the elements of plants to be few, and the stimulants he can generally command, to a great extent, from his own resources. In studying the laws of chemical and vital philosophy, he has wide scope for observation, and for controlling the processes of decomposition and recomposition to the accomplishment of specific ends. From spring to autumn, from autumn to spring, his broad acres are his laboratory and observatory. He sees in the death and decay of one season elements for the beauty, brightness, and wealth of the next.

In this country there is no position too high for the aspirations of the intelligent and successful farmer. Has he by his own toil subdued the land, and by his acquaintance with nature's laws reaped golden harvests, he finds himself secure in the possession of two means for controlling men. First, that "willingness to know his work and do it," which Carlyle says is the mission of every man, and which forms a strong link of brotherhood with those who are delving. Second, he possesses wealth, which has a charm to open a passage to the hearts of a certain class. If, added to these, he has that intelligence which commands the respect of cultivated persons, he possesses perhaps greater power than any other man for gratifying an honorable ambition. The people regard him as their own, they look up to him, and are willing to crown him with the wreath of honor.

JUNE ISLE.

COTTON CROP OF 1855.

The following is the regular annual statement made up by the New York Shipping List on the 1st September. We incorporate it, as usual, in our pages :

NEW ORLEANS.			TEXAS.		
Export—	Bales.	Total.	Export—	Bales.	Total.
To Foreign Ports.....	1,067,947		To Foreign Ports.....	14,160	
Coastwise	903,817		Coastwise.....	64,720	
Stock, 1st September, 1855.	89,425	1,909,689	Stock, 1st September, 1855.	2,062	
Deduct—			Deduct stock, 1st Sep., '54.		
Rec'd from Mobile, Mont- gomery, &c.....	82,067				89,942
Received from Florida....	4,147				2,305
Received from Texas.....	16,690		Total 1855.....		90,787
Stock, 1st September, 1854.	24,121		Total 1854.....		110,525
		77,045			
Total 1855.....		1,982,644	FLORIDA.		
Total 1854.....		1,346,935	Export—		
			To Foreign Ports	85,018	
MOBILE.			Coastwise.....	101,996	
Export—			Stock, 1st September, 1855.	166	187,180
To Foreign Ports.....	840,811		Deduct stock in Apa- lachicola, 1st Sep., '54.		
Coastwise.....	112,792				583
Consumed in Mobile.....	1,638		Total 1855.....		186,597
Burnt at Mobile.....	608		Total 1854.....		155,444
Stock, 1st September, 1855.	28,519	488,908	GEORGIA.		
Deduct—			Export—		
Received from New Orleans and Texas	85		To For'gn Ports—Uplands.	176,194	
Stock, 1st September, 1854.	29,278	29,818	S. Isl'ds .	6,993	
			Coastwise—Uplands.....	195,714	
Total 1855.....		454,595	Sea Islands . .	7,474	
Total 1854.....		583,684	Stock in Savannah, 1st Sep- tember, 1855.....	2,130	

COTTON CROP OF 1855.

597

		Bales.	Total.	NORTH CAROLINA.	
Stock in Augusta, 1st September, 1855.....		1,707		Exports—	
			390,219	To Foreign Ports.....	59
Deduct stock in Savannah and Augusta, 1st September, 1854.....			11,518	Coastwise.....	26,090
				Total 1854.....	26,139
Total 1855.....		378,694			11,524
Total 1854.....		816,005		VIRGINIA.	
SOUTH CAROLINA.				Export—	
Exp'ts from Charleston—				To Foreign Ports.....	1,459
To Foreign Ports—Uplands.	296,798			Coastwise, and	29,741
S. Isl'ds.....	18,680			Manufact'd (th'n Fr'm Ports) }	
Coastwise—Uplands.....	198,458			Stock, 1st September, 1855.....	550
Sea Islands.....	5,771				31,750
Burnt at Charleston.....	871			Deduct stock, 1st September, 1854.....	750
Stock in Charleston, 1st September, 1855.....	2,085		522,158	Total 1855.....	81,000
				Total 1854.....	21,926
Exp'ts from Georgetown—				Rec'd at N. York by N. Y. & Erie Canal.	877
To Northern ports.....	4,500		526,658	Do.....do.....1854, 1,182	
				Rec'd at N. York by N. Y. & Erie R. R.	684
Deduct—				Do.....do.....1854, 2,258	
Received from Florida....	2,887			Rec'd at Balt. & Phil. from the S. & W.	0,600
Received from Savannah....	7,468			Do.....do.....1854, 8,990	
Stock in Charleston, 1st September, 1854.....	17,081		27,886	Total crop of the U. S., 1855.....	2,847,889
				Do.....do.....1854.....	2,980,027
Total 1855.....		499,973		Decrease from last year.. bales..	82,698
Total 1854.....		416,764		Decrease from year before..do...	415,548

Comparative statement of growth.

Crops of—	Bales.	Crops of—	Bales.	Crops of—	Bales.
1854-'55.....	2,847,339	1843-'44.....	2,030,409	1832-'33.....	1,070,438
1853-'54.....	2,930,027	1842-'43.....	2,378,875	1831-'32.....	987,477
1852-'53.....	3,262,882	1841-'42.....	1,683,574	1830-'31.....	1,038,848
1851-'52.....	3,015,029	1840-'41.....	1,634,945	1829-'30.....	976,845
1850-'51.....	2,355,257	1839-'40.....	2,177,835	1828-'29.....	857,744
1849-'50.....	2,096,706	1838-'39.....	1,360,532	1827-'28.....	720,593
1848-'49.....	2,728,596	1837-'38.....	1,801,497	1826-'27.....	957,261
1847-'48.....	2,347,634	1836-'37.....	1,422,930	1825-'26.....	720,027
1846-'47.....	1,778,651	1835-'36.....	1,360,725	1824-'25.....	569,249
1845-'46.....	2,100,537	1834-'35.....	1,254,328	1823-'24.....	509,158
1844-'45.....	2,394,503	1833-'34.....	1,205,394		

Exports to foreign ports from September 1, 1854, to August 31, 1855.

From—	To Great Britain.	To France.	To North of Europe.	Other Foreign ports	Total.
New Orleans.....	717,328	178,823	62,632	109,164	1,067,947
Mobile.....	215,248	111,090	8,357	5,716	340,311
Texas.....	8,926	1,570	5,664		16,160
Florida.....	28,068	5,320	1,630		35,018
Savannah.....	171,993	8,106	3,088		183,187
Charleston.....	204,102	70,656	13,700	27,020	315,478
North Carolina.....	59				59
Virginia.....			1,459		1,459
Baltimore.....	1,491		91		1,582
Philadelphia.....	300				300
New York.....	200,967	34,366	37,124	7,378	279,835
Boston.....	1,234		1,555	84	2,873
Grand total.....	1,549,716	409,931	135,200	149,362	2,244,209
Total last year.....	1,603,700	374,058	165,172	176,168	2,319,148
Decrease.....	54,034		29,972	26,806	74,939
Increase.....		38,357			

Consumption.

Total crop of the United States, as before stated		Bales.	
Add—			2,847,339
Stocks on hand at the commencement of the year, Sept. 1, 1854 :			
In southern ports	85,486		
In northern ports	50,117		
			135,603
Makes a supply of			2,932,942
Deduct therefrom—			
The export to foreign ports	2,244,209		
Less, foreign included	891		
			2,243,318
Stock on hand 1st September, 1855 :			
In southern ports	76,644		
In northern ports	66,692		
			143,336
Burnt at New York, Boston, and Philada.,	2,704		2,389,358
Taken for home consumption			593,584

Quantity consumed by and in the hands of manufacturers north of Virginia.

Crops of—	Bales.	Crops of—	Bales.	Crops of—	Bales.
1854-'55.....	593,584	1844-'45.....	389,006	1834-'35.....	216,888
1853-'54.....	610,571	1843-'44.....	346,744	1833-'34.....	196,413
1852-'53.....	671,009	1842-'43.....	325,129	1832-'33.....	194,112
1851-'52.....	603,029	1841-'42.....	267,850	1831-'32.....	173,800
1850-'51.....	404,108	1840-'41.....	297,288	1830-'31.....	182,142
1849-'50.....	487,769	1839-'40.....	295,193	1829-'30.....	126,513
1848-'49.....	518,039	1838-'39.....	276,018	1828-'29.....	118,853
1847-'48.....	531,772	1837-'38.....	246,063	1827-'28.....	120,593
1846-'47.....	427,967	1836-'37.....	222,540	1826-'27.....	103,483
1845-'46.....	412,597	1835-'36.....	236,733		

We give below our usual table of the amount of cotton consumed the past year in the States south and west of Virginia, and not included in the receipts at the ports. We have decreased the estimate, as a whole, from the year previous, but give it only for what it purports to be, an estimate, which, we believe, approximates correctness. Thus—

States.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.
North Carolina...	15,500	20,000	20,000	13,000	1,500	20,000	20,000	18,500
South Carolina...	6,000	15,000	15,000	10,000	10,000	10,000	12,000	10,500
Georgia	6,000	20,500	37,000	13,000	22,000	20,000	23,000	20,500
Alabama	5,000	7,000	6,000	4,000	5,000	5,000	6,000	5,500
Tennessee	12,000	12,000	12,000	8,000	7,000	5,000	6,000	4,000
Ohio, etc.	30,500	30,500	27,500	12,000	16,000	30,000	38,000	26,000
Total.....	75,000	110,000	107,500	60,000	75,000	90,000	105,000	85,000

To which, if we add (for the past year) the stocks in the interior towns, (5,000,) the quantity detained in the interior, and that lost on its way to market, (unusually large the past year—about 25,000 bales,) to the crop as given above, received at the shipping ports, the aggregate will show, as near as may be, the amount

raised in the United States the past season—say, in round numbers, 3,178,000 bales, (after deducting the 34,000 bales new crop received this year to 1st inst.) against 3,000,000 for the year 1853-'4; 5,360,000 for the year 1852-'3; 3,100,000 for the year 1851-'2; and 2,450,000 for the year before.

In reference to the consumption of cotton in the country the past year, both north and south, it will be seen that it has fallen off, although the production has been pretty nearly the same. This may be accounted for, primarily, by the partial failure of the crops of cereals in 1854, the consequent high prices of bread-stuffs and provisions, and the general pressure for money felt by all classes in all sections of the country.

The quantity of new cotton received at the shipping ports to the 1st September amounted to 34,079 bales, against 1,890 last year, 716 in 1852-'3, and 5,125 the year before. Thus it will be seen that the quantity of new cotton received at the ports to the 1st September, this year, is largely in excess of the last; but it is an admitted fact that, at that date, there remained of last year's crop (detained in the interior by low rivers, caused by an unprecedented drought) a very large quantity—say 250,000 bales.

HEMP.

The cultivation of hemp prospers most in northern latitudes, producing a heavy and elastic lint, which adds to its strength and durability.

The production of this article in our country has reached a high limit. The demand for home consumption and exportation keeps pace with its growth.

The manner of growing and preparing it for market is simple. The land should be ploughed down in the fall to get the winter freezes, and when the ground will permit in the spring it should be cross-ploughed and well harrowed. The seed is sown broadcast, about two bushels to the acre, after which it should be brushed, and rolled in.

The earlier hemp is planted the more valuable and successful is the crop. Hemp is a plant which, after arriving to a certain height, supports itself in its growth from the atmosphere. It does not impoverish the soil as other plants. A sandy, loamy soil is best calculated to produce a good crop. Good bottom land will answer. It is known that land which has been in sod for a length of time will produce hemp for twelve years in succession. At the expiration of that period, if sown down in clover, and left standing for three years, it will produce for nine years longer.

At an early period, the mode of preparing it for market was to pull it up by the root, and also to cut it with a hook-shaped instrument, each of which processes was very laborious. In late years an improvement has been made by the use of the cradle, which reduces the labor. The mode of preparing it after it is cut is as follows: It is bound up into sheaves, and thrown into shocks. For water-rotting, it should be kept from exposure to the weather, which tends to discolor it, and thereby reduce the value. The process of water-rotting is to immerse it in pools of standing water, or so constructed as to allow the water to pass in and off, as occasion may require. The hemp should remain in the pool until the stalk becomes saturated. When this is finished the stalk will break short off, or the mucus, which holds the lint to the stalk, will become macerated, and rise on the surface of the stalk.

The time occupied for this process will require, in the months of August and September, from four to six days. It should then be taken out of the pool and spread thinly down on the ground. After drying, it should be thrown into shocks, well secured at the top, to prevent the weather from penetrating the centre, and should remain in that condition until the frosty weather arrives, to allow its breaking out. Various modes for breaking it out by machinery have been used, but the most general is the hand-break.

The dew-rotted hemp is spread on the ground in the months of November and December, and remains so until, from the effects of the dew and rains, the stalk becomes brittle and relieves the lint, which is then taken up and thrown into shocks, and afterwards broken out.

Hemp-growing is profitable, being an immediate crop, which does not interfere with the general duties of the farmer, or with his attention to other crops. A crop of water-rotted hemp is double in value to a dew-rotted one. The expense

in preparing the former is not more than twenty-five to thirty per cent over the latter.

Hemp will generally command the cash and a ready market. The average yield to an acre is about 800 pounds. For water-rotted, the price at the farmer's door for a good quality, in ordinary times, is eight dollars per 112 pounds, or for dew-rotted ranges from four to five dollars per 112 pounds. D. M.

HOW THE SOUTH PROGRESSES.*

The New York city press seem to be astonished at the business being done just now by the ocean steamers plying between that city and the different southern Atlantic and Gulf ports—at the quantity of produce and number of passengers they are transporting. The receipt of wheat in any large quantities from ports south of Alexandria and Richmond seems to them a new commercial wrinkle, and one full of interest. They are rubbing their eyes over their increased receipts of that grain from Tennessee and Georgia via Charleston, and seem already to look forward to see the two States we name above become in a very few years the great wheat-producing region in the country. This state of wonderment at the natural and very plain result of the recent construction of the railroads to points tapping the heart of northern Georgia and Middle Tennessee, arises wholly from the fact that the conductors of the journals above referred to have adopted their ideas of the industrial capabilities of the southern people and climate from the foolish ranting of anti-slavery lecturers, editors, staticians, and politicians.

The railroads have at once produced results that are fast opening their eyes to the truth. That the people of the south do not labor so intensely as those of the north, arises for the most part from the fact that a given amount of labor at the south yields much richer returns in money and "kind" than at the north. Thus, the necessity for constant labor is not always before the eyes of the southern man, as before those of him at the north. The southern man, too, (as a class,) parts with the fruits of his labor much more lightly than the northern man does; as, the world over, that which is easily acquired is lightly valued, comparatively. These are facts which bear upon the comparative industry and thrift of the people of the two sections upon which the anti-slaveryites are constantly harping, taking due care to keep in the back ground not only the simple facts to which we refer, but another very important fact in the same connexion, viz: that though the north are the more industrious and thrifty, such a thing as suffering from want—absolute want—is almost entirely unknown in all the slaveholding States; while nearly every white man in them is an independent citizen in fact, as well as in name; such a thing as a capitalist or proprietor attempting to influence the votes of a number of his equals under the law, being a thing absolutely unheard of at the south. But we have no room for speculations upon the effect of the institutions of the two sections upon the actual condition of their respective inhabitants.

The flood of agricultural products from regions of the south, which have not heretofore sent them to the great markets, is but commencing. In eighteen months, or so, the the Virginia and Tennessee railroad connexions between the Potomac, at Alexandria, and Memphis will be completed, when the southwestern region of Virginia and eastern Tennessee will at once commence growing grain extensively for exportation, for which no other quarters of the country are better suited, and in which they have not engaged, up to this time, on account of want of facilities for getting produce to market. So, also, will all western North Carolina, and a large portion of northern Alabama, be, not long hence, very extensive growers of grain for exportation, as they, too, will shortly enjoy railroad facilities. The effect of railroads upon the industrial condition of Georgia is already realized by all who study such subjects, having astounded those in New York, especially, who deal in produce. It is but a type of what such improvements are destined to do for the whole interior of the southern States. One important result will be the prompt transfer of a very heavy amount of capital from the north to the south; because its employment there in agriculture, and other pursuits dependent

*From the Washington Star.

on agriculture progress, will yield almost double the profit, with, at least, as little risk as at the north, where competition has already greatly reduced profits in every business whatever. Mr. Clay's "American system" changed the relative commercial and industrial condition of the two sections of the confederacy wonderfully, and railroads are fast restoring the equilibrium thus disturbed.

CAN COTTON-SEED OIL OR ROSIN OIL BE MANUFACTURED WITH ADVANTAGE IN ALABAMA? *

If this inquiry could be answered affirmatively, it would be of immense value, as the materials are abundant and the uses great. There are very many objections, but it is by no means impossible, and greater have been overcome by skill, capital, and enterprise. Let us look at its magnitude. The State makes half a million bales of cotton, which, at forty bushels each, give twenty millions of bushels of seed; deduct therefrom for planting and other purposes one-fourth, and it leaves fifteen millions, worth 12½ cents, at home, \$1,875,000. These fifteen millions, at 2½ quarts of oil to the bushel, would be 9,375,000 gallons, at 40 cents, worth \$3,650,000, which would leave, after deducting cost and transportation, \$2,650,000—a pretty round sum, having no drawback but starving the corn-crib.

Messrs. Smith & Follin, of Petersburg, Va., many years ago, patented a machine for hulling or cracking the seed, on the outward periphery of two granite rocks moving inversely to each other. The product was screened by machinery, and nothing but the kernels or inner contents used. These were mashed by one rock on its rim following another, and both pinned vertically to an upright turning shaft, and following in a groove or space chiseled out of a granite bed rock. The machine for grinding gold in rock ore is precisely the same, and the construction not beyond the capacity of an ordinary workman. The mashed kernels, pulp or meal, were put in coarse hair-cloth envelopes in mortars, and the pestle driven till all the oil was out. It is the same as the linseed-oil mill. The oil is a light pea green, and entirely odorless, and answers well for paint, and probably all the other purposes for which vegetable oils are used. If it could be used for soap, as the palms and olives are, it would transfer that valuable manufactory to the plantation, and no one would need a better fortune than would follow it. I have seen the oil made, cooked with and used for painting, but I am not familiar with the subject. The objections I saw were that the hulling mill was imperfect and gave trouble, but all the subsequent process gave none. This might be overcome by skill. The other objections are what you are probably a judge of. The cotton-seed must be sound, and our general practice is to throw it out in bulk, where it heats, spoils, and loses its oil. The secret is that its bulk is too great to bear transportation to or down the rivers. A mill was put up at Natchez, on the Mississippi, and one just below Mobile many years ago, and have been discontinued. If it can be put up advantageously, it will probably be by some large planter, who will save his seed properly and use it in the manufacture of soap made on the plantation, or ship it for paint-oil, and feed away the oil-cake to his stock. Five hundred bales of cotton would leave for use fifteen hundred bushels of seed, or 9,000 gallons of oil. I believe no pestling or pressing in any way has been found that can extract the oil from the seed without hulling. It may be worth the trial, and if it succeeds, the reward would be an ample compensation.

Our next inquiry will be, Can rosin-oil be made with profit here? This also is a matter of some moment. It has been calculated, though probably over estimated, that the crop growing would be one million of gallons of spirits of turpentine, and if so, at the usual proportion of one barrel to every ten gallons, there would be made this year 100,000 barrels of rosin weighing 310 pounds each. Each barrel should give twenty gallons of oil, and make 2,000,000 gallons, at 25 cents would be \$500,000. The rosin hauled to the river pays the grower handsomely at one dollar, which is \$100,000, and leaves \$400,000 for labor and profit. Rosin, at present prices, is too low to bear transportation from so many who are not convenient to navigation, that a very large quantity will be run into pits near the still and thrown away. The supply will be still great. The manufacture is in iron stills, to hold each from 25 to 30 barrels, with guard iron bottoms, and the

* Alabama Planter.

heat made so high as to dissolve the rosin, and it runs into oil, and this is all. So much heat scales the iron and wears it out fast, not however to be much of an objection. The oil when made has some gumminess, and is used for ships' bottoms and sides, and out-houses and fences, with the admixture of some dryings, and is not fit for a fine house. With the admixture of a portion of lard-oil, it is used on locomotive axles and coarse machinery. Its principal use is in the illegitimate purpose of adulterating other oils, and for which it is largely used. I think there would be a limited demand for it in this country, at any rate till the experiments now going on may refine it so cheaply as to increase its use. It can be made at 10 to 12 cents a gallon, not including the barrel to receive it. The oil makes a brilliant gas, and has the advantage of being conveniently transportable. Gas made directly from rosin is as good and much cheaper, but the rosin is not so transportable.

A barrel of rosin that weighs three hundred and ten pounds will make two thousand cubic feet of gas, and four barrels thereof as much as a ton of coal. The apparatus, exclusive of the gasometer, will cost, packed and shipped at New York, under \$500, and will make lights enough for the very largest hotel; and the saving in oil and candles would cover the outfit and manufacture many times in the year. The St. Nicholas Hotel, Broadway; the hotel at Sharon Springs, in the State of New York; and the Fanquier, in Virginia, are all beautifully and economically lighted with gas made on their premises from rosin. The gas is but the melting of rosin under a high heat, dripping into a red-hot iron pot closed up, or a retort with a pipe from it into the gasometer, which, as it comes in contact with the red heat, vaporizes, becomes gas, and passes into the gasometer for use. Any one sees the operation who sees a drop of water thrown on a hot stove. It disappears in the shape of gases.

A PLANTER.

ON THE COTTON GIN AND INTRODUCTION OF COTTON.

ANSWERS TO QUERIES OF THE HON. W. B. SEABROOK, OF EDISTO, S. C., BY
KINSEY BURDEN, ESQ., OF JOHN'S ISLAND. (1844.)

Query 1.—Describe Eaves' gin—when was it invented, and how much cotton could it separate from the seed per day?

Answer.—I am under the impression that I have been informed Eaves' gin was invented and used first in the Bahamas, (or French West India Islands, where a gin of that kind was "long used,") and was brought by Eaves to Georgia, used there, and then to this State, or nearly simultaneous in both, about the year 1797-98. I have seen but one or two of the original gins in operation, and I cannot say, from my own knowledge, how much cotton they could separate; but I was informed about 300 lbs. They, however, did not answer the expectations of those who used them at that time in this State; which I have supposed to have been owing more to the careless or unskilful manner of constructing and working the propelling power than to the gin itself, as there appeared to be a defect in that respect in those which I saw at work. They were, however, thought, in this State, to tear and injure the long staple cotton too much. I consider Mr. Farris' gin Eaves', with some slight improvement.

Query 2.—Who sent to Europe the first bag of cotton, and in what year? In what year was it grown as an experiment, and by whom?

Answer.—Your second inquiry, I think, has been fully answered in my reply to your first letter; and I believe I am safe in saying, if any long staple cotton was shipped to Europe from South Carolina before the joint crop of my mother and Mr. James King, it was produced in Georgia or the West Indies, sent to Charleston, and shipped from thence to Europe; which I know to have been a common practice since.

Query.—How many acres to the hand were planted? And what was the usual quantity of cotton made to the hand?

Answer.—My own laborers usually planted from two and a half to three and a half acres of cotton to the hand, from one and a half to two acres of corn, and about three-fourths of an acre of potatoes.

Query 4.—Was manure used? If so, what kinds, and in what quantities?

Answer.—I cannot say what was the general practice on these points; I can only speak of my own and that of some others that came under my notice. I

have already said that I used a compost of lime and cow-dung in 1800; and this was mixed in the proportion of one-third lime to two-thirds of the other material, of which mixture about as much as would stand on a hoe or spade was placed to each hill and chopped up with the earth, so as to be well incorporated with it. In 1826, lime and other materials, as stated above. In 1803, I used limo alone. I have also used lime advantageously for corn, root potatoes, wheat, and rye. But when oats and the common field-pea was afterwards planted on the same land, I noticed the oats and peas blasted on all the spots where the heaps of lime had been laid down. Whether this effect on oats and peas was caused by the earth in those spots having been stimulated to exhaustion by the lime, or there is something in lime not suitable when applied to those plants, I am unable to say.

Some years ago, I urged two planters, who resided in the limestone region of this State, to use lime on their exhausted lands, but I have not heard whether they tried it.

I have long been under the impression, that if *lime*, and marl *rich in lime*, (but lime calcined by fire I prefer, as a purifier of the air,) were used freely throughout our State as a manure, that not only would the product of the fields be much increased, but the general health of the inhabitants would be improved, and more so if connected with *deep drainage*, both open and under, where the land is too quaggy for open drains. This has been the result with my own plantation on this island since I began to drain deep, and limed my lands occasionally, in the course of thirty-six years since, their healthiness has been improved. It has been said by a certain writer, (I think Dr. Anderson,) that sheep pastured on lands that have been limed will never have the rot. This I have proved correct, my sheep have been comparatively very healthy, while some of my neighbors at different times have lost a large part, and others all their flocks, by the rot or some other disease. After liming a field, I have frequently smelled the lime in the wind at a distance. Under the belief of the purifying effect of lime on the atmosphere, I suggested to the mayor of Charleston to strew it freely in the streets when the cholera appeared there.

In the year 1803, Mr. James King saw me draining the ponds (before this time the ponds in the fields were not considered worth draining, the custom was to plant to the edge of the ponds, and leave the ponds surrounded with trees or bushes, and thus were many fields seen studded with these clumps, holding water, and obstructing the free circulation of the air, so beneficial to the health of the inhabitants, and the crops,) in my field, previous to planting them in cotton, and invited me to go and see what he was doing with his ponds; accordingly I found him carrying the pond-mud into his cotton field as a manure, when I remarked to him, that I considered marsh-mud better, as it contained a portion of salt and lime. Some years after he tried the marsh-mud, and was thus the first to use it as a manure for cotton. I do not recollect the year in which his experiment with it was made. Having to clear land for several years, to make a change of fields, I did not use marsh-mud so soon as Mr. King used it in his fields. Several persons went to see the effect it produced in his fields, and it was soon after generally used. I have heard my mother say, that the year after the great hurricane of 1752, my grandfather's field on Burden's Island produced a most abundant crop of corn and peas; and the increased fertility of the soil was attributed to the overflow of the land with salt water, and the alluvial deposit. In the storm of October 1804, a part of my cotton field and corn field also was overflowed. The next year both cotton and corn were very much improved as far as the salt water had covered the land. The Bible, that *only sure guide* to eternal life, also gives us useful hints upon almost every occupation of man. And thus, whilst Christ was preaching to the Jews, near two thousand years ago, He said "Ye are the *salt of the earth*, but if the salt has lost its savor, *wherewith shall it be salted?*" which shows, that the people to whom he was preaching, were familiar at that time, with the use of salt for their land. My stable is near to the margin of the high land; the manure is thrown in a pile where the spring-tides reach it; for many years I have had the salt water thrown over it, before it was carted out; from 16 to 28 single cart-loads per acre, of this compost spread over the listing, improves the cotton very much; particularly in cold-black, and grey lands.

The practice of manuring was not generally adopted I believe until after 1806. In 1805-6, I removed to this island,* and at that time the extent of the manuring

* John's Island, S. C.

appeared to consist in moving cow pens over the potato patches, and using cotton seed for the corn; but for cotton a change of fields, and rest to the land for one or two years, the planters, generally, appeared to depend on for a crop; one individual told me he had cured spots of rust with green salt-marsh; another said he had used pine-trash on spots of his weak land with advantage. I manured with compost from the stock pens in the mode now generally pursued, or with the simple green, or decayed vegetable matter, (as rushes, marsh-sedge, pine-trash, &c.) spread along the ground and listed in; or, on the list, and bedded on, where there was not much vegetable growth on the land; in the proportion of 16 to 84 single cart loads per acre. Marsh-mud I have applied in the same proportion, cotton seed from one peck to two pecks for each row of 105 feet, scattered over the land and listed in; but it was generally used at that time for corn only, and put into the hills.

Query 5.—Was the plough employed in the cultivation of the crop, as well as in breaking up the land?

Answer.—I have been informed, one or two persons used the plough on this island after the revolutionary war, but soon laid it aside. The plough was very unpopular in this region with our best planters for many years; the prejudices against it were very strong, until of late years. It was used by my father, and after his death I saw it in use by my mother's direction; but not again until about the year 1803, when I observed it in use with Dr. John Mitchell of Willtown. He used the Dutch-shovel plough with advantage, and offered me two of that kind, which I accepted and continued to use occasionally; I afterwards supplied myself with other ploughs of different forms—the bar-shear, for breaking up land with a heavy sward; the narrow bull-tongue, for breaking up stiff clay land, and tracking out land, with which six acres per day can be done by one man and horse, while with the hoe, the usual quantity for one hand is three acres; also for tearing out joint-grass spots, and nut-grass; a rake plough to collect the grass into heaps, after the bull-tongue; the Dagon, Freeborn, and half shovel ploughs for bedding land, and partly to attend the crop; and the trenching plough for small grain. In bedding land with the plough, I have found that half an acre can be finished off with the hoe afterwards, with as much ease as a fourth without the assistance of the plough, and that the land was better prepared for the seed. Four acres can be done, with one plough to throw up one furrow on each side of the bed, after the plough; one acre to the hand can be done, to haul up the bed, and hill the cotton or corn.

Query 6.—How often was the crop worked, and how late in the season?

Answer.—This depended on the faithful manner of doing the work; whether the season was wet or dry; whether the land planted was new, or had been at rest one or two years; or land that had been cultivated annually. If the work was faithfully done, the season dry, and the land fresh, the grass was less, the plants grew faster, and shading the land sooner, required less work, and the crop was laid aside sooner. If otherwise, the plants grew slower, were more subject to the depredations of grubs and bugs, and it was more difficult to get an early good stand of plants. There was also more grass to contend with, especially if grass or weeds had been permitted to go to seed in that field the preceding year. My rule has always been to work the crop while there was grass to take out. After the pods begin to form, and the lateral roots to shoot out from the tap-root, it is ruinous to the crop to hoe deep. If the cotton is tall, it is safer to pull out the scattered grass, weeds, and late cotton with the hand; the earth shake cleanly off, and place them in hands-full on the top of the bed between the hills, where they will soon rot down, and add something to the growth of the crop. In the year 1812 I visited my plantation at John's Island, about the first of September, when there was a tolerable blow of cotton on the lower arms. I found my driver had not finished his last hoeing, 12 acres being left; the field was wet and the grass was small, and chiefly in the alleys. I ordered him therefore to break off, and put the people to gather the cotton that was open. At the end of the year, the line was distinctly marked where the hoes were stopped—the cotton not hoed became very grassy, the pods were small and produced but little.

Query 7.—Were the ridges made permanent, or changed as often as the cotton was planted? Were they large or small, narrow or broad?

Answer.—The general practice was to change the ridges as often as the land was planted, with some few experimental exceptions; one in 1802 I have already given you. The ridges were generally made broad and flat in high land; large and

high in flat land, and finished off large and high in both, when the crop was laid aside, forming the sharp edge of a triangle in the centre of the alley; but it was not always that the overseers or drivers obeyed this order, and there were some deviations from this rule by individual planters themselves.

Query 8.—What were the usual prices obtained?

Answer.—I have already given you the answer to this in my first, and in the preceding part of this letter, in extracts taken from my plantation books, and other notes.

Query 9.—Was it the practice to reject all cotton covered with fur or down, and to preserve only the pure black-seed?

Answer.—The general practice, until about the year 1826, was to wray off all the coated seed, and reject all but the black-seed. Since 1826 many persons planted the coated seed; I planted it myself for several years, but found it too troublesome and laborious to gin out, and have again rejected it.

Query 10.—Did all planters get the same price? If not, was the difference attributable to preparation, or superiority of staple?

Answer.—All persons who cleaned their cotton well obtained the same price for several years after the introduction of cotton as a crop; but afterwards the purchasers began to discriminate. The cause of difference was two-fold, it being in some cases attributable to the cleaning, in others to the superior staple, and in some to both causes.

Query 11.—How were the bags packed? Was the screw resorted to? Was the green-seed cotton packed with the pestle?

Answer.—Both green and black-seed cotton was packed with the pestle for several years; afterwards the screw was resorted to by large planters, for the green-seed cotton.

Query 12.—Was the ginned cotton well prepared for the bag? Was the whipper used?

Answer.—The ginned cotton, by some planters, was well prepared; by others it was not well prepared. Some prepared it by switching it on a square net fixed on a frame; others used a small *rude* whipper, with one barrel; others used neither. I projected an improvement on that whipper, which was executed for me by Mr. John Bernie—the double-drum whipper now in common use. I gave him the benefit of the improvement, and paid him fifty dollars each for three of them which he made for me.

Query 13.—What was the daily task of a laborer with the hoe, making the ridge hoeing? or were the negroes worked in gangs?

Answer.—In listing land, if the land had a heavy sward the task was one-fourth of an acre; if only one year at rest, and lighter, one-third of an acre; if it had been cultivated the year before, half an acre; unless there were in it large cotton stalks, or there were some other good reason for deviating from the general rule. In ridging, one-fourth of an acre was done, unless the plough was used. In hoeing, half an acre.

I have only worked the people in gangs when planting and gathering the crop. I have heard of some individuals, planters, working in gangs, but I believe it was practised by very few.

Query 14.—What was the weight of the bags?

Answer.—I have taken from an old weight-book of Messrs. R. & T. Burden, factors, for the year 1803 the average weight of the cotton bags of twenty-eight planters, myself among them, and found it to be 258 27-28, which was about the fair average weight of the cotton bags about that time. I have also given you among the preceding extracts a later average of my own cotton bags for 1807, 302 6-46 lbs.; in 1808, 275 10-27 lbs.; and in 1809, 375 13-26 lbs. Other crops have probably been packed in the same rates.

Query 15.—What were the diseases of the cotton-plant? Did any insect depredate on the cotton-plant? If so, enumerate and describe them?

Answer.—The common rust, caused by an impoverished soil, and in some cases by the opposite extremes of excessive hot, dry or excessive wet weather, prevailed very much, and was the only formidable disease the cotton-plant was subject to for many years. There was, however, another disease, less extensive, which some planters named the "blue rust," and which was developed in what are called "alum spots." Latterly, "the yellow leaf" has been noticed—a disease more formidable than either of the preceding; in some seasons pervading every part of the field. It commences with the long leaves turning yellow and falling off, and

the whole plant becomes diseased. It may properly be denominated the "canker." A partial canker, also, produced by external injuries to the cotton-plant in its young state, which corroded, and caused the plants to break down near to the ground.

Among the depredating insects, I mention the grasshopper, which in some years is very numerous and destructive to the cotton while in its young state; the very small insect, generally called the bug; the cut-worm; and the caterpillar described above.

Query 16.—In what year did the caterpillar first make its appearance; what was the damage done? Is the caterpillar the same worm that depredated on the indigo plant?

Answer.—This question is answered in the extracts given of the crops of 1802, 1804, 1822, and 1825, in the preceding part of this letter.

I have found it impossible to circumscribe the information you have requested within the concise compass you have mentioned, to make the account intelligible; I have, therefore, been more prolix than I wished. Your third letter has been received, and will be replied to. I have no objection to your publishing my first letter.

FLOUR EXPORTS.

We have compiled from Treasury reports the following table of export and destination of flour from the United States. It affords a sort of chart of the direction which the flour export trade has taken at times:

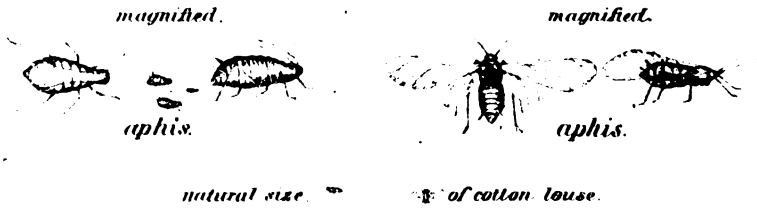
Destination of flour shipped from the United States..

Where to.	1851.	1852.	1853.	1854.
Swedish West Indies.....	5,315	8,050	2,301	600
Danish West Indies.....	50,102	52,592	50,332	31,056
Dutch East Indies.....	1,873	2,040	2,025	350
Dutch West Indies.....	19,217	17,570	18,952	13,489
Hanse Towns.....	.....	38,635	1,735	11,686
Holland and Belgium.....	594	14,660	925	26,980
England.....	1,004,783	1,531,994	1,378,065	2,026,021
Gibraltar.....	195	4,415	2,169	13,206
British East Indies.....	1,600	3,506	1,194	544
British West Indies.....	294,731	305,791	359,184	261,369
British American Colonies..	252,380	199,560	218,475	225,006
Australia.....	.....	10,464	177,325	79,416
France.....	.....	2,700	8,784	728,279
French West Indies.....	7,902	7,652	7,901	31,259
Hayti.....	43,867	42,902	50,421	56,121
Cuba.....	5,511	17,200	1,537	11,608
Spanish West Indies.....	2,285	7,949	1,967	6,070
Madeira.....	7,006	8,287	9,200	4,360
Cape de Verds.....	838	835	277	4,721
Cape of Good Hope.....	.....	13,993	23,050	10,254
Mexico.....	14,964	25,081	17,039	13,828
Honduras.....	5,912	6,231	8,107	4,241
Central America.....	2,573	5,670	2,789	2,332
Colombia.....	47,477	53,257	43,881	42,097
Brazil.....	374,711	345,025	433,843	315,319
Argentine Republic.....	22,612	12,942	24,315	27,236
Chili.....	4,327	6,836	10,870	3,859
South America.....	200	1,480	9,644	356
West Indies.....	4,079	765	1,650	.....
Africa.....	5,430	9,993	6,838	3,533
Northwest Coast.....	2,593	7,837	5,544	9,783
Other ports.....	19,158	49,347	44,579	57,120
Total barrels.....	2,202,335	2,799,339	2,920,918	4,022,386
Average price.....	\$4 77	\$4 24	\$5 10	\$6 88

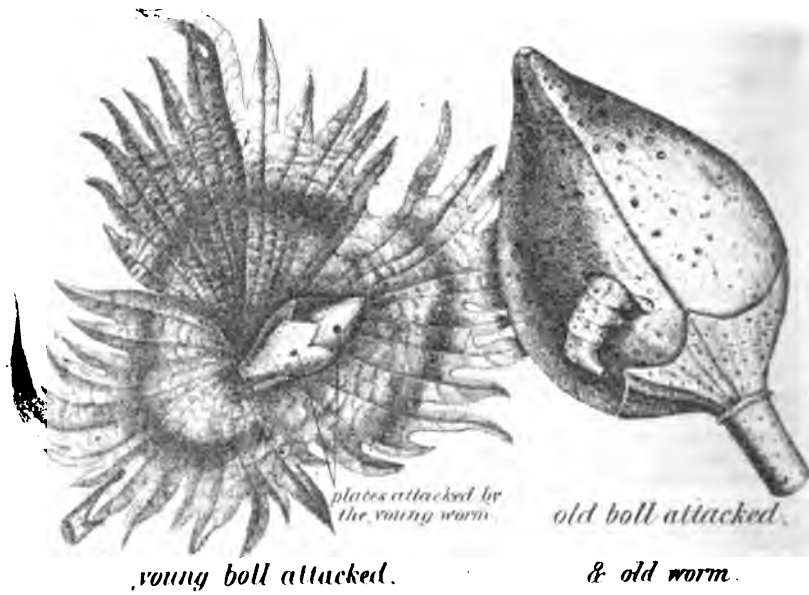
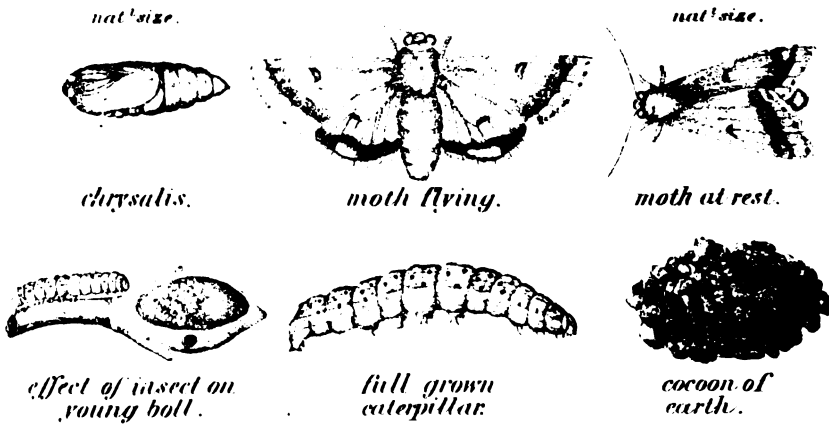
INSECTS INJURIOUS TO THE
COTTON.

Plate 3.

COTTON LOUSE.



BOLL WORM.



The return is for the year ending June 30, 1854. In that year, as in 1847, France was a good customer for flour, but England, as usual, took about half the whole. It is to be observed that the quantities sent to the West Indies, South America, &c., is in the aggregate about half, and it is what they *must* have. When there is an English demand to raise the price they must pay more. The above table embraces flour only. The aggregate quantity of flour and wheat exported in 1853 was, in bushels, 18,900,000, at an average of \$1 12½, and last year it ranged 28,148,595 bushels, at an average of \$1 55. The following table gives the aggregate export and official value, showing the yearly average for several years:

Aggregate export of flour and wheat from the United States.

Year.	FLOUR.			WHEAT.		
	Barrels.	Value.	Ag. value bbl.	Bushels.	Value.	Average.
1847..	4,382,496	26,133,841	\$5 95	4,399,951	6,049,350	\$1 37½
1848..	2,119,393	13,194,109	6 22	2,034,704	2,669,175	1 30
1849..	2,108,113	11,280,532	5 35	1,527,534	1,756,848	1 15
1850..	1,385,448	7,098,570	5 00	608,661	643,745	1 07
1851..	2,202,335	10,524,331	4 77	1,026,725	1,055,732	1 00
1852..	2,799,329	11,869,143	2 24	2,694,540	2,555,209	95
1853..	2,920,918	14,783,294	5 60	3,890,141	4,354,403	1 12½
1854..	4,022,386	27,701,444	6 88	8,036,665	12,420,172	1 55

Nearly all the wheat went to France and England. The above figures give, however, only the quantities of domestic growth exported. The following show the imports, mostly Canadian, and exported from bond:

Year.	WHEAT, BUSHELS.			FLOUR, CWT.		
	Imports.	Exports.	Excess retained.	Imports.	Exports.	Excess retained.
1851....	1,237,856	184,107	1,053,749	586,379	312,925	273,454
1852....	870,889	451,874	419,015	496,201	486,075	10,126
1853....	862,295	605,931	257,364	517,931	461,326	56,605
1854....	1,277,352	553,798	345,554	531,798	492,989	38,809
1855....	2,196,650	1,097,113	1,099,547	777,728	616,206	161,522

It follows that, in 1853, about 1,400,000 bushels of Canadian wheat were imported and consumed in the United States, displacing as much of native growth which was exported.—*U. S. Times.*

INSECTS INFESTING THE COTTON PLANT.—NO. 2

(See lithograph in October number.)

1. THE COTTON LOUSE.

When the cotton plant is very young and tender, it is particularly subject to the attacks of the cotton louse, (*Aphis?*) which, by means of its piercer, penetrates through the outer coating, or parenchyma, of the leaf or tender shoots, and sucks the sap from the wound. The under part of the leaves or young shoots are the places mostly selected, and the constant punctures, and consequent drainage of sap, enfeebles the plant, causing the leaf to curl up, turn yellow, and subsequently wither away and fall to the ground. The young lice are extremely

minute and of a greenish color; but when they become older, they are about tenth of an inch in length, and often of a dark green, or, in some instances, almost black. I fancy the color somewhat depends upon the health of the plant, as well as that of the insect, or, perhaps, upon the food, as I have seen green and black lice promiscuously feeding upon the same plants. The female produces her young alive during the summer, when she may often be seen surrounded by her numerous progeny, sucking the juice from the leaves and still producing young. Some naturalists state that the females, late in the fall, produce eggs for the future spring generation. If so, it is in order to preserve the species, as the insects themselves are easily killed by cold and frost; and their increase would be incalculable were it not that kind nature has provided many enemies amongst the insect tribe to prevent their too rapid multiplication. Both males and females are said, at certain seasons, to possess wings, but the females and young in summer appear to be wingless. The end of the abdomen of both sexes is provided with two slender tubes, rising like horns from the back, from which exudes the "honey dew," or sweet gummy substance seen sticking to the upper sides of the leaves beneath them, and which forms the favorite food of myriads of ants. Although young plants are mostly attacked, yet I have seen old "stands" in Georgia with their young shoots completely covered with this pest as late as November.

The principal insects that destroy the aphid are the lady-bird, the lace-fly, and the syrphus, all of which wage incessant war upon the lice, and devour all they can find. Another fly, the ichneumon, likewise lays an egg in the body of the louse, which, hatching into a grub, devours the inside of the still living insect until it eventually dies, clinging to the leaf even in death, and the fly makes its appearance from the old skin of the aphid. A fuller description, however, of the enemies of the louse, together with figures, is given hereafter, plate 8. When old cotton plants are suffering from the attacks of the louse, many planters recommend the tops of such to be cut off and burned, and by so doing partially succeed in destroying them; yet, when we consider that by this method many young "blooms" and "forms" must likewise be destroyed and prevented from maturing, it must be confessed that the remedy is almost as bad as the disease. In a garden or greenhouse, a solution of whale-oil soap, from a syringe, showered upon the upper and under parts of the foliage, has been used with much advantage; yet, upon the extended scale of a cotton plantation, such a remedy is altogether too trifling and impracticable, and until we can collect further information from intelligent planters upon this subject, we must rest content with the instinct of our insect allies.

THE BOLL-WORM.—The egg producing the boll-worm is deposited by a tawny yellowish-colored moth, or miller, (*Heliothis*?) plate 3, during the warm evenings in summer and fall, and may be seen hovering over the tops of the cotton blooms from about an hour before until an hour after sunset. This moth flits from flower to flower, depositing a single egg on each, which hatches in the course of three or four days, and the little caterpillar, or worm, immediately eats its way into the centre of the enclosed bloom, or boll, and after devouring the interior, escapes to a leaf, where it soon casts its skin. The ruined bloom in the meantime "flares" open and falls to the ground, and the young worm then attacks another bloom, or boll, in the same manner; and at length, as it acquires size and strength, it is enabled to bore into the nearly matured bolls, which are entirely destroyed by its punctures, as at this period, if the interior is not devoured, the rain penetrates the boll, and the cotton becomes rotten and useless. The caterpillar, after attaining its full size, descends into the earth, where it makes a silky cocoon, interwoven with particles of gravel and earth, in which it changes into a bright, chestnut-brown chrysalis. Those which went into the ground in September and October appeared as perfect moths about the end of November. Whenever a young bloom is seen in the field with the calyx spread open, it may be safely concluded that it has been attacked by the young boll-worm, and will soon perish and fall to the ground. If many of the fallen blooms are closely examined, they will mostly be found to have been previously pierced by this worm, or some other pest. Several intelligent planters have accused various other insects of piercing the young bolls, and thus causing them to fall; but during the short period of my sojourn, I could detect none in the act, except the boll-worm. There is a striking similarity between this and the corn-worm in appearance, food, and habits, both in the caterpillar and perfect state, which leads to the supposition that the boll-

worm may be the young of the corn-worm moth, and the eggs deposited on the young bolls as the nearest substitute for green corn, and placed upon them only when the corn has become too old and hard for their food. This fact, however, has not as yet been fully proved, but can easily be done next season by any intelligent planter who will try the experiment. Colonel B. A. Sorsby, of Columbus, has bred both insects, and declares them to be the same; and moreover, when, according to his advice, the corn was carefully wormed, on two or three plantations, the boll-worms did not make their appearance that season on the cotton; notwithstanding on neighboring plantations they committed great ravages. The worms vary much in color and markings, some being brown, while others are almost green; all, however, are more or less spotted with black, and slightly covered with short hairs. These variations of color, perhaps, may be caused by the food of the caterpillars, which appear in every shade between the two. The chrysalis is of a bright chestnut-brown, and the moths of a tawny yellow color. The upper wings are yellowish in some specimens, with a shade of green, but in others red. There is an irregular dark band running across the wing, about one-eighth of an inch from the margin, and a crescent-shaped mark near the centre of the wing. Several dark spots, enclosing a white spot, are also discovered on the margin. The under wings are lighter colored, with a broad black border on the margin, and also veined distinctly with the same color. In the black border, however, there is a brownish-yellow spot, of the same color as the rest of the under wing, which is more distinct in some specimens than in others, but may be plainly perceived.

It has been recommended to light fires in various parts of the plantations at the season when the first moths of this insect make their appearance, as they are attracted by light, and perish in great numbers in the flames; and if the first brood of females be thus destroyed, their numbers must necessarily be reduced, as it is highly probable that it is the second or third generation which does the principal damage to the crops. Some successful experiments in killing these moths with molasses and vinegar were made by Colonel Sorsby, a year or two since, which I will give in detail, in his own words: "We procured eighteen common-sized dinner plates, into which we put about a half a gill of vinegar and molasses, previously prepared, in the proportion of four parts of the former to one of the latter. These plates were set on small stakes, or poles, driven into the ground in the cotton field, with a six-inch square board tacked on top to receive the plate; each stake occupying an area of about three acres, and in height a little above the cotton plants. These arrangements were made in the evening, soon after the flies had made their appearance. When examined the next morning, we found from eighteen to thirty-five moths to each plate. We continued the experiment for five or six days, extending the plates over the entire field, each day's success decreasing until the number was reduced to two or three only to the plate, when it was abandoned as not being longer worthy of the trouble. The crop that year was but very little injured by the boll-worms. The flies were caught, in their eagerness to feed on the mixture, by alighting into it, when they were unable, from its adhesive nature, to make their escape. They were evidently attracted by the odor of the preparation—the vinegar, doubtless, being an important agent in the matter. As flies feed only at night, the plates should be visited late every evening, the insects taken out, and the vessels replenished, as circumstances may require. I have since tried the experiment with results equally satisfactory, and shall continue it until a better and more economical one is adopted."

SOUTHERN CONVENTION AT RICHMOND, VA., NOVEMBER 19, 1855.

We are rejoiced to perceive by the annexed notice that the standing committee have accepted the invitation of Richmond and fixed upon that city for the next meeting of the convention. We suggested this point ourselves in May last as the most eligible in every respect. Let the South now be active in preparing its delegations, for right sure are we that Richmond will know how to entertain them, and that all Virginia will be ready to aid in the deliberations of the Convention.

It will be remembered that the meetings of this body have been in Baltimore in 1849, in Memphis in 1850, in Charleston in 1850, and in New Orleans in 1851.

To the people of the Southern and Southwestern States: Among the last acts of the Commercial Convention at New Orleans, in January last, was the adoption of the resolution offered by the Rev. C. K. Marshall, of Mississippi, viz :

Resolved, That the acting President of this Convention be requested to appoint a committee of seven gentlemen, whose duty it shall be to fix upon the time and place for the next meeting of this body, and publish the same in the journals and newspapers for the information of the people, and that said President shall be chairman of the committee.

The following persons were appointed on said committee, viz : C. K. Marshall, of Mississippi, M. T. Johnson, of Texas, William C. Dawson, of Georgia, James Lyons, of Virginia, W. B. H. Howard, of Alabama, Leslie Combs, of Kentucky, John L. Lewis, of Louisiana, and the acting President, N. D. Coleman, of Louisiana.

The Board of Trade of the city of Richmond, Va., through their President, Hon. Horace L. Kent, has communicated to the chairman of the committee a copy of a series of resolutions adopted by the Board in session on the 4th day of June, 1855, two of which resolutions are in the following terms, viz :

Resolved by the Board of Trade of the city of Richmond, That we cordially extend an invitation to the Commercial Convention of the southern and western States, to meet in our city on such future day as, after consultation, may be deemed advisable for their next session.

Resolved, That the President of this Board be requested to communicate with the chairman of the committee appointed to select the place for the ensuing session of the convention, and transmit to him a copy of the above resolutions.

(A copy.)

WM. B. ISAACS, *Secretary.*

In pursuance of the authority vested in the undersigned by the Commercial Convention of the southern and western States, held in the city of New Orleans in January last, and of the polite and official invitation of the Board of Trade of the city of Richmond, in Virginia, the committee has selected the said city of Richmond as the place, and the third Monday (the 19th) of November next, as the time of holding the next session of said southern and western Commercial Convention, unless the Board of Trade may prefer some other day, of which they will give timely notice.

The committee also take the liberty of requesting all journals and newspapers friendly to these conventions to publish this communication, or such parts thereof as may be requisite to give general notoriety of the time and place selected.

N. D. COLEMAN, *Chairman for the Committee.*

THE SUGAR GROWTH IN LOUISIANA.

A friend in New Orleans writes as follows : I wrote you yesterday. I resume the pen to-day to correct a gross error which has crept into your September number. At page 353, it says : "*and in the year 1765 there was sugar enough manufactured for home consumption, and in 1770 sugar had become one of the staple products of the colony.*" Where the author got his authority for so stupendous an assertion the ghost of Munchausen alone could tell, if summoned by the spirit rappers. There was not a pound of sugar made in the colony at the time mentioned.

Judge Martin, who came very early to Louisiana after the cession, and who had the best means of information, for he could get it from a large number of men who were personally acquainted with the state of the colony in 1765 and 1770, thus writes on the subject in his history—page 125, 2d vol.

"Since the year 1766 the manufacture of sugar had been *entirely abandoned* in Louisiana. A few individuals had, however, contracted to plant a *few canes* in the neighborhood of the city. They found a want for them in the market. Two Spaniards, Mendez and Solis, had lately made larger plantations. One of them boiled the juice of the cane into *syrup*, and the other had set up a distillery in which he made indifferent *taffia*."

A *few canes* for the market—*syrup, taffia*—but no sugar, as you see.

The same author continues : "Étienne Boré, a native of Illinois, who resided about six miles above the city, finding his fortune considerably reduced by the failure of the indigo crops for several successive years, conceived the idea of re-

trieving his losses by the manufacture of sugar. *The attempt was considered by all as a visionary one.* (Why visionary, if good sugar had ever been made in the colony?) His wife, (a daughter of Destrehan, the colonial treasurer under the government of France, who had been one of the first to attempt, and one of the last to abandon, the manufacture of sugar) remembering her father's ill success, warned him of the risk he ran of adding to instead of regaining his losses, and his relations and friends joined their remonstrances to hers. He, however, persisted; and having procured a quantity of canes from Mendez and Solis, began to plant."

This was written at a time when instant contradiction would have been given to the author if he had, in the slightest degree, swerved from the truth.

At page 131, the same author observes: "Boré's success in his first attempt to manufacture sugar was very great, and he sold his crop for twelve thousand dollars. His example induced a number of planters to plant cane."

The fact is, that before Boré's success a sort of thick sweet paste had been made in Louisiana, but no sugar—at least what we now understand by the word sugar. The reason was that the juice of the cane did not *granulate*. My grandfather, Mr. Boré, was the first who succeeded. See page 349 of History of Louisiana, 3d volume.

Yours, &c.,

CHARLES GAYARRÉ.

ON THE FORESTS AND TIMBER OF SOUTH ALABAMA.

I must be understood as speaking very generally, and without very accurate information, though perhaps sufficiently so for the object in view, which is to draw public attention to it. The pine, the white-oak, the live-oak, the cypress, and some others, are in very great abundance, and to some extent quite accessible to our commercial port. The pine occupies the space of about one hundred miles square, bounded by the seashore and the two adjoining States, and to appearance the largest and the finest body that you can well conceive. The wood is close grained and hard, with a small circle of sap, rising from seventy to eighty feet in height without a limb, having but little foliage, and makes the very best of timber for durability and hardness. It is the old yellow pine, and known botanically as the *Pinus palustris*. The pitch, or turpentine pine, has a coarser grain, is smaller, more crooked, with shorter body and deeper sap, with more foliage, is little in quantity, and makes an inferior timber. The streams that penetrate into this large body of superb old yellow pine timber have bars at their mouths too shallow for the sized boats required for its profitable transportation either to New Orleans or this place. The only exception is the Alabama river, and that comes in contact only at a few bluffs or through the small creeks leading into it. The Perdido and Fish have bars under four feet. The Pascagoula, with a wide mouth, passes more than five hundred miles, under the names of Chickasahatchie, Leaf, and Bowie rivers, through the heart of this splendid forest, but the bar at its mouth is only about five feet, and so influenced on this tideless coast by the winds that this cannot be depended on. There are a few steam-mills on the coast dependent on a precarious supply of logs, and none in the interior, as the population is sparse and the navigation bad. There have been a few spars of the largest size furnished on contracts for the French and Spanish governments for their military marine. There have been none furnished for the use of our government. It will give some idea of sizes that the largest class of spar is required to be eighty-two feet long, twenty-nine and a half inches in diameter, eight-sided for one-sixth of its length, and then tapering with sixteen sides to twenty-five inches diameter at the small end, to be perfectly straight and free from knots, except small ones, and such as by the grain are made integral parts of the wood. The agricultural uses of this country are not great. It is very sparsely sprinkled over with small farmers, who have fine water, health, and fine stock range, but with little fertility of soil. The numerous deer and turkeys near the daily passage of the mail boats furnish them with sugar and coffee in exchange for their fine game for the tables of the wealthier residents of the city. This scarcely touched great body of most superb timber is all in the government ownership, and liable to entry at \$1 25 per acre. Its value is in its hereafter.

The cypress are of two kinds, such as have rather larger size near the ground, with less foliage at their tops, with straight and smooth bodies, growing only on

the very richest land, and make the best timber. The other and more usual timber is fine. This wood, growing in swamps, and having such large bodies, cannot be hauled, and therefore is generally cut and left for the annual overflow, or freshet, when they are collected, floated, and rafted, to their place of sale. The usual price for mill-sawing is about fifty per cent. more than for the same quantity of pine. The wood is soft, and when well seasoned is principally used for the finer house works, such as doors, sashes, shutters, &c., &c. The selection of this tree is to be guided by its very smooth surface, as the slightest outward irregularity is sure to have a corresponding large defect within. There is a great deal that has the defect of being pecked, or having the look of honeycomb. It is a soft and durable wood, and much used.

The black cypress, so named from being of darker color, is a hard and heavy wood, sinking in water, never growing as large, and more the growth of the creek bottoms. It is not used for sawing, and not floating, cannot well be got at. It is generally used for posts, for which its exceeding durability recommends it.

The juniper, or white cedar, is also the growth of the smaller swamps on the sea coast, and though sometimes growing to three feet in diameter, may be considered a small growth. It is much used for shingles, staves, molasses barrels, and posts. It is a durable and very beautiful and soft wood, and is much used for doors, sashes, &c., and for models, being as soft and suitable as the red cedar. I think juniper root knees, from its toughness and durability, and its plank, from extreme lightness, would suit well for the whale boat and the fancy regatta craft. The supply is illimitable, and the price, sawed, would not be more than double that of pine.

The white oak is our great timber for naval and other purposes, and is the general growth of our swamps, and of great size and is very near to water navigation, to our seaport town, Mobile. The large body of it growing in the fork of the Alabama and Tombeckbe rivers, within 100 miles of our city, is conveniently reached by any craft not drawing more than twelve feet water, or that can lay at the wharves of the city. This tree grows often 40 and 50 feet high without limb, with straight body, exceeding five feet in diameter, and with so little taper as to square three feet at 50 feet in height. The roots make knees for the very largest class of ships, and of the hardest, closest-grained, toughest, and most durable wood. This should commend it to the attention of those engaged in the construction of our military and mercantile marine, and must do so in time. The bodies, when they will split, make the pipe-stave of four feet six inches long, and when they will not may be hewn into square timber. When the tree is intended for knees the large roots should be cut as the tree stands, at suitable distance from the body, and when down at such length of stump as the knee may require. The auger bored into the centre of the stump root makes the chamber for the powder which blasts it open, and all the rest is done by the maul and wedge and the broad axe. The present price is remunerating when for such quantity as justifies the expense of the proper equipments for transport to the river and conveyance to the city. The pipe-stave, at fifty dollars for 1,240, is also remunerating, but it uses up the forest very fast. It takes a very uncommon tree to make 500, and generally not more than half that. The stave should be 1 and 4 inches and 4½ feet long. There is much very smooth hickory scattered over these swamps that may be made into capstan-bars and hand-spikes, and that may find a market with the white oak. The ash, for oars, is tough only in the butt cuts, and are better gotten in the eastern States than here. Keep always in mind that oak is heavy, and grows on soft swamps, and without roads, and that your timber wheels and teams must be strong; that the conveyance by boat will be expensive; and that it can only be rafted on lighter wood, having two-thirds more of floating surface.

These forests, like the pine, have scarcely been touched, and look for their value to the future; though probably an early future.

The live oak is perhaps the hardest and most durable wood known, almost uninjurible, except from its own very acrid sap. Where it grows on free and dry uplands it is excellent timber, but by far the largest quantity grows on the small bayous close to the water, on the immediate coast. The little ponds everywhere in the pine woods are skirted by them. If when cut they show a speckled and soft grain within they are of no value. The other shows its quality by its close and compact grain. The practised eye decides on the moment that it lights on the live tree the quality of the wood. It grows to a considerable height without limb in the cane brake and dense wooded swamps immediately on the seacoast.

Growing alone it is a short-bodied, wide-spreading tree, giving every possible crook to branch and root to suit for knees of all sized vessels, from the very largest to the ship's yawl. Large quantities of this wood go from the south to the naval depots and ship-yards north, to be seasoned for our ships-of-war. To an urgent request from Pensacola that one of the six new frigates ordered to be built should be constructed there, the answer of the Secretary was, that he was sorry that there was no timber there. The timber for the Boston yard was, no doubt, got not far from Pensacola.

I have thus attempted to give some idea of our abundance of timber, and some of the uses to which it may now, and must in time, be applied. Let us conclude by saying that our seacoast has very many suitable situations for ship and spar yards, with unquestionable health, where oak bows and stems, ribs, transoms, and all else constituting the frame of ships, may be procured cheap, and delivered by boat, and where the pine planking and decking and for finish will be laid alongside at ten dollars per thousand feet. The rough labor, under the skill to direct, can be procured for steady employment at less price than that of the average labor of the United States.

J. D. B. DE BOW, Esq.

A PLANTER.

THE SOUTHWEST.

EDWARDS, MISSISSIPPI, August 25, 1855.

MY DEAR SIR: Our friend and fellow-citizen by birth, Colonel A. G. Summer, is quite eloquent upon the great advantages our native State, South Carolina, has over the "magnificent dry rivers, the bayous, mosquitoes, cholera, and yellow fever," of the west. All this is well enough to talk about, but we of the southwest think we have some country too, despite a multitude of evils. It is very true we have this year, 1855, dry rivers, and every year those annoyances, mosquitoes, and withal we have a great many things to rejoice over. There are men who are fitted to enjoy just such lives as we lead out in these "wilds," and some of us are content—as man generally gets to be—and look not back to, nor sigh for the flesh pots we have left behind us. "Comparisons are odious." Carolinians might be stirred up to a greater exertion without attempting to disparage us. I hope "none will be offended" at the colonel's burning desire to incite the blood of our brethren to a more rapid circulation, for he means not to condemn us; the fact is, he only sees a newspaper scrap or two, where some few out of a few thousands cannot get to market to buy necessaries, he does not say they have not the means. I love to see his enthusiasm, his love of country, and no doubt were you and myself back among its red hills and sand-covered flats, we would hold up our heads and huzza for the chivalry too. But all this, "by the way," it is as sincerely desired by many of Carolina's sons who have expatriated themselves that Carolina should arouse herself, as it can be by the colonel himself, and many of us will aid him and others to our ability. The educated, the wealthy, the influential, should, by example and argument, urge a different course to that now pursued. Cotton on lands producing one to two thousand pounds per acre will pay; where the production is only five hundred to one thousand, will cause the people to leave. You may argue until doomsday to induce planters to remain, not to move where cholera and mosquitoes kill and *then* eat up, but so long as so many of us live and make cotton after all these deaths, and can laugh at the fears of others, why folks will move.

"Thirty-one bushels and one peck per acre" of corn, and *twenty bushels per acre* of wheat, will pay better than our cotton fields.—(See crops made by A. G. S., in American Cotton Planter, pages 243, 244.) Corn yields about \$45 and wheat \$30 per acre, prices of 1855; this balances dry rivers. But seriously, is it not the interest of Carolina to grow grain, wool, stock, to lay down her broad lands to pastures and grain, convert her worn and gullied hill-sides into Burmuda grass pastures, feed thousands of sheep, raise mules for export, and leave to the rich lands of the west the growth of cotton. It is destiny, and no use to kick against it. Much of the same thing ought Georgia, Alabama, and Mississippi to do. Much of our lands are better fitted for rearing stock than for cotton. It is even true of Hinds county, with Big Black as a western boundary and Pearl on the east, fourteen or fifteen miles from the Mississippi, that she ought to do something else. By census report, with 164,457 acres of improved land, she

makes 19,829 bales of cotton, showing a bale to two acres, admitting one-half of improved land is in corn, pastures, and fields, or, showing not 700 pounds of raw cotton per acre; for there are some of us scattered up and down in old Hinds who have, for near twenty years, averaged full 1,200 pounds. Put down 80,000 acres in corn, and the product in 1850, 853,305 bushels, is the smart crop of some ten bushels per acre—an error in giving in returns, unquestionably, but nevertheless it shows that even here we should rally and attend to our business as it should be.

But the pecuniary question is not the main question—we are not placed on earth for money matters alone; a higher destiny awaits us. We should improve that we should elevate our position. As a country becomes possessed of comforts our population is elevated; we should, therefore, strive for an independency of our country. When we are not dependent upon the north, or the west, or the east, for bread, or meat, or shoes, or hats, or clothing, &c., &c., then will those countries have less to do with us, and less cause to meddle with what concerns them not, and we in better condition to return a Rowland for their Oliver.

Yours, truly,
M. W. PHILIPS.

J. D. B. DE BOW, Esq.

TENNESSEE AGRICULTURE.

On the subject of agriculture Governor Johnson writes so sensibly that we deem two passages of his message worth transcribing:

“The legislature, at its last session, passed an act to establish a State agricultural bureau, with county and district societies subordinate thereto, &c. By this act the governor of the State was constituted president *ex officio* of the bureau. The bureau was organized, according to law, on the 20th day of April, 1854. Full details of its action will be laid before you by the secretary of the bureau. From his report you will see that county societies have been chartered in seventeen counties, division fairs were last year held in the eastern and middle divisions of the State and by the Sumner county society, and that a new and beneficial interest has been awakened on the subject of agricultural improvements. Division fairs will this year be held in each division of the State, and the biennial State fair is now in progress near Nashville, under your own immediate inspection. The agricultural interest has always been and will probably long continue to be the leading interest of Tennessee. It is wise and proper that it should be fostered and encouraged by the legislature by all reasonable and legitimate means. I am of opinion that the law of 1854 was a wise and salutary step in the progress of agricultural and mechanical improvement and reform.

“Nature has been prodigal in her gifts to our State, and the representatives of the people can render no service of greater value to their constituents than by affording a judicious encouragement to associations having for their object the development of the agricultural and mineral wealth of the State, and stimulating the mechanical skill and industry of its citizens. When our people learn that the necessity for labor is a blessing rather than a curse; that ‘he who causes two blades of grass to grow where but one grew before is a greater public benefactor than he who conquers armies;’ and that honor, fame, and fortune may be as certainly earned in the workshop of the artisan as in the offices of the learned professions, and as freely accorded by the public sense to the former as to the latter, then we shall have lived down an obstacle in the way of State progress as absurd as it is injurious.”

THOROUGH DRAINAGE—ITS IMPORTANCE TO SOUTHERN AGRICULTURE.

It was a matter of general remark among the planters, this spring, that they had never known better stands of corn and cotton. The explanation of this fact may inculcate a lesson, in practical agriculture, which we are slow to learn, but which, when once appreciated and acted upon, will prove of incalculable benefit to southern husbandry. We attribute the excellency of the stands of corn and cotton, and the favorable growth of those crops in the early part of the spring, to the fact that the last winter was the driest which we have ever known, and that, consequently, the earth, which generally at seed time is filled with water from

winter rains which ordinarily fall so heavily in our winter, was warm, and, though dry, yet moist enough to vegetate the seed and give them a rapid growth from the start. It is a fact which practical men are beginning to heed, but which seems yet almost unknown, that one of the chief obstacles in the way of successful cropping, even on our most favorably situated fields, is the presence of an excess of moisture in the soil. Most frequently the indications on the surface are sufficient to point out those places where this excess exists; but in many instances this difficulty occurs where a casual examination of the surface discovers no evidence of the fact. Our best lands are those which most commonly suffer from this cause; those which lie level, and which have frequently been enriched from the operation of the very cause which renders them unproductive—low places where the water has been accustomed to settle, carrying with it the vegetable and saline substances which have been washed from other parts of the surface, where they have been decomposed and incorporated with the soil, and are now in a condition to be appropriated by growing crops, possessing all the elements of fertility, and yet being so damp and cold that seed deposited in them either do not vegetate, or, if they do, produce sickly or unproductive crops. How frequently is it the case that the planter is deceived in his estimate of the yield of a field which contains his best land, and ought, he thinks, to make his largest crops. The corn or cotton, however, is spotted. In some places the growth is luxuriant; in others, where the soil is just as good, the crop looks small and yellow. It is these wet spots which reduce the average of the field and disappoint his estimates; and they will continue to do so until the difficulty is removed by thorough draining. To recur to the illustration with which we set out, there are a great many such places which this year are producing fine crops, and heretofore have had scarcely half a stand upon them. The preceding dry winter had drained them, and thus removed the only obstacle to their productiveness. We are throwing away a great deal of labor every year in attempting to make crops upon such spots. No amount of manure, and no amount of labor with the plough and hoe, no matter how judiciously expended, can make good crops on such places. There is too much water in the soil; and until it is relieved of that difficulty it is folly to expend manure or labor upon them. Examine the roots of the crop which feebly struggles for an existence upon those wet places, and the little fibrous rootlets which shoot out in every direction in search of food for the plant, will be found to have rotted and cannot, therefore, perform their office.

We cannot, of course, afford such an expensive system of thorough drainage as is practised in Europe, and some of the densely populated districts of our own country. Where land, for instance, is worth \$100 per acre, its owner would be justifiable in going to an expense in reclaiming it, that would be altogether inadmissible in a country where land is sold for \$10 per acre. It would be simply folly for an agricultural journal to recommend a system of thorough drainage to its readers, which would cost more than the land would be worth after it was reclaimed; while at the same time, precisely the same system may be profitably adopted in a different section of the country. We do not, therefore, recommend thorough drainage, as the term would be understood in England: for as a question of economy, it would be folly to undertake it here; but at the same time, we do recommend a system of drainage more thorough than we practice in this country, and we recommend it because we believe that it will pay well, even on our cotton plantations which sell at \$10 per acre. The most casual observer of our southern plantations must be forcibly impressed with the inattention with which this subject is treated almost everywhere. And we believe, to-day, that southern agriculture would be more improved by strict attention to the wants of the soil in this respect than by any other single step in the right direction. If every half acre within our cultivated fields, which is too damp to produce a good crop, were thoroughly dried, the increase which would be added to our crop would be astonishing.—*Soil of the South.*

EDITORIAL NOTES.

DIRECT TRADE.—We call the attention of our readers to the circular of "the direct trade and European agency" established at New Orleans. It will be found under our advertisement head. We will take occasion at an early date to refer to this subject again.

SOUTHERN EDUCATION.—See the notice of the University of Mississippi, prepared by a contributor to the Re-

view, and published on the third page of the cover. The south should sustain her own institutions, has ever been our text.

QUARTERLY LAW JOURNAL.—J. W. Randolph, of Richmond, Virginia, issues a prospectus for such a work, which appears among our advertisements. It is an important southern enterprise.

NOTICES OF BOOKS, ETC.

The Newcomes: Memoirs of a most respectable Family; edited by Arthur Pen-dennis, esq.; in 2 vols. The Harpers, New York, have published the work complete, in very handsome style, in one volume. There are more than a hundred capital illustrations. Everybody will order and read the work, now that it can be had complete. We know of no richer repast that could be served up.

A Visit to India, China, and Japan, in the year 1853; by Bayard Taylor: New York, G. P. Putnam & Co., 1855. Bayard Taylor is one of our most popular and agreeable authors, and what he writes is always sought with avidity. The travels embraced in this volume were in India, China, Japan, the Loo-Choo and Bonin Islands, &c., &c.

Clouds and Sunshine: Art, a Dramatic Tale; by Charles Reade: Boston, Ticknor & Fields, 1855. Mr. Reade is known as the author of "Peg Woffington" and "Christie Johnson," and has announced in press "Susan Merton."

The Araucanians, or Notes of a Tour among the Indian Tribes of Southern Chili; by Ednund Rewel Smith, of the U. S. Expedition. The Harpers publish this volume. Mr. Smith accompanied the naval expedition of Lieutenant Gilliss, and his work is largely illustrated.

Oakfield, or Fellowship in the East; by W. D. Arnold, of the 53d Regiment B. N. J. The author says of his work: "The description of Indian (East) every day life may not be very inviting, but I think the Indian reader will allow it to be, and the English reader in his testimony allow it to be tolerably correct."

The work is issued by Ticknor & Co., Boston.

Stray Leaves from the Book of Nature; by Schele de Vere, of the University of Virginia: New York, G. P. Putnam. A southern work is too rare not to be prized. It is full of beauties of every sort.

Blackwood's Magazine for September. Leonard Scott & Co., New York.

Scenes in the Practice of a New York Surgeon, by Edward H. Dixon, M. D., editor of the Scalpel, with eight illustrations by Darley: New York, DeWitt & Davenport, 1855. Doctor Dixon, long known as an eminent surgeon, standing at the very head of the profession, and celebrated likewise as the author of several popular works on health, physiology, &c., has found time, amid his various and laborious duties, to produce a book, many scenes in which are pronounced fully equal, if not superior to Dr. Warren's celebrated "Diary of a London Physician," with this additional interest, that they are actual occurrences in every-day life, happening in our very midst—not matters of fancy.

In addition to the Scenes, are several articles on health, written in a popular manner, each of which is alone worth the price of the book. And we particularly recommend to mothers the Treatises on Scarlet Fever, Hooping Cough, Croup, Consumption, &c., as presenting to all, in a clear and lucid manner, the proper treatment of these common diseases.

Besides its other excellencies, the book is most beautifully executed; the illustrations by Darley are magnificent, and the publishers have spared no expense on the letterpress and binding.

DE BOW'S REVIEW.

DECEMBER, 1855.

ANCIENT SLAVERY.*

There is one plain fact to start from, in regard to which we agree with the professor and his fellow believers, and but one. This is that slavery, in name and in fact, existed among the Greeks, Romans, and other ancient nations, and that it does not exist nominally in France and Great Britain, and the northern portion of the United States. All that has been said about the degradation of labor in the one period, and its dignity in the other, is rhetoric and rhodomontade.

When the next step is taken, and it is asserted that the presence of slavery and the low estimation of labor degraded the citizens, and impoverished the ancient states, we hesitate before giving our assent to these positions. We cannot help remembering that slavery formed the basis of the Spartan institutions during the whole period of Spartan ascendancy and heroism; that much of the agriculture, trade, commerce, finance, and manufactures, were in the hands of slaves during all the generations of Athenian triumph and glory; that when Æschylus composed his tragedies, and Pindar sung his odes, and Thucydides wrote his history, and Plato delivered his divine philosophy, and Demosthenes spoke, and Aristotle mastered, collected, expanded, reformed, and multiplied all knowledge, slavery was universal. The battles of Thermopylæ and Salamis, of Plataea and Mycale were fought by slaveholders, and it is not easy to see how slavery degraded the Greeks. It was a senate of slaveowners that the Gauls found in the porticoes of Rome; it was slaveowners who conquered the world, legislated for all succeeding ages, and laid the broad foundations of modern civilization and modern institutions. We remember, too, that, when Hannibal overran Italy and threatened Rome, the Car-

* Concluded from November No.

thaginians held numerous slaves, and even prosecuted the slave-trade with energy and profit; and that the soldiers who composed the armies of Hannibal were drafted from countries where slavery prevailed. In these facts we do not discover any convincing evidence that slavery either degraded the citizens or impoverished the state. There were other causes at work much more competent to produce that lamentable result. The abuses of popular government, the venality of electoral votes, the increase of wealth, luxury, and rapacity, and the corroding influences of universal greed, were much more marked and efficient elements of corruption. It is to these causes that the ancients, Livy and Tacitus, attributed the decay of Roman morals and Roman stability. It is to the like causes that the ruin of Rome is ascribed by Montesquieu, notwithstanding his reference of Roman repugnance to labor, to the employment of slaves.* It is to the avarice of the wealthy and their oppression of the poor, and not to slavery, that Salvian, the best interpreter of the last scenes of Roman decay, assigned the impotence of the western empire against the northern barbarians.† It was not slavery that generated these evils, but the decay of public and private virtues which led to the inordinate extension and abuse of slavery. The same evils prevail in England and France, where slavery is a heinous sin; and there pauperism, mendicity, the fever of trade and competition, and the consequent taxation, direct, indirect, and industrial, are consuming the forces of the nations, and sensualizing one part of the population while it brutalizes the mass. There are scarcely any mendicants in Turkey;‡ we suppose there are none in Russia; there are none in the southern States except visitors from free labor communities; but England and France, and other states enjoying unadulterated free labor, are overrun, and will be eaten up by the increasing army of paupers and beggars. For these reasons we doubt whether it was slavery which degraded the citizens of the ancient world, exhausted the public resources, and undermined the government.

* Montesquieu. *Grandeur et Décadence des Romains*, chap. X.

† "Nulla siquidem major pauperculorum est depopulatio, quam potestas. Ad hoc enim honor a paucis emitur, ut cunctorum vastatione solvatur. * * * Ut pauci illustrentur, mundus evertitur. Unius honor, orbis excidium est." *De Gubernat. Dei*. lib. iv, c. iv, cf. c. xv, lib. v, c. iv, viii, lib. vii, c. xv.

‡ "The only places where Turkish beggars are seen is the area or vicinity of a mosque, and even here very few obtrude themselves; forming a strong contrast to the multitudes that beset houses of Christian worship. Those who with us are disabled by age or sickness, are in Turkey supported by their masters, either because they are slaves, or because the charity of the Osmanli will not suffer his brother to want," &c.—Walsh. *Constantinople and the Seven Churches of Asia Minor*, page 39.

The same doubts, generated by the like evidences, arrest us before acquiescing in the common assumption, that the slaves displaced the free laborers of antiquity, and destroyed the population, the industry, and the agriculture of the ancient nations.

“The evil effects of this gigantic system of slavery were gradually developing themselves. * * * But the system was gradually working its own ruin, and with it the ruin of the empire. Slavery made labor disreputable. Slaves occupied the positions, and were engaged in the pursuits which might have furnished employment for the poor common people. Almost the only occupation left for the poor Roman was agriculture, and from this he was finally driven by the competition of the wealthy landholder, who cultivated his estate by the unpaid labor of slaves.”

We will not insist upon the unintentional admission that the ruin of the system of slavery was the ruin of the empire; nor ask where was the employment for the poor if they had been exposed to the competition of the emancipated slaves. We have cited the passage for a different purpose, and with a more liberal object. In it the professor has condensed the main allegations against ancient slavery. But substitute the word machinery for slavery, and it is applicable to the most advanced civilization of the present century. It could not, therefore, be a just censure of slavery any further than it was a censure of machinery also. There is one important difference, however, to be noted. The present complaint is the redundance of the population; the accusation against antiquity is its scantiness. The ruin which is charged upon the latter is equally menaced by the former, and it is not easy to discern the advantage which starvation from the excessive number of the hungry enjoys over starvation from the diminution of the producers. Repletion, as well as inanition, may occasion death; and between the ancient and the modern systems there is only a choice of the modes of evil. The disciples of Malthus reprobate marriage and the increase of families, and in some cases have been tempted into the recommendation of general vice and demoralization.* The wealthy classes alone listen to the prescription, and accept celibacy as the condition and price of luxury and licentiousness. The Roman emperors endeavored to arrest both depravity and depopulation by encouraging matrimony, and rewarded the augmentation of families; for at that time, too, the independent classes avoided the expenses and embarrass-

* Rickards on Population, ch. viii, p. 192-6. Proudhon, *Contrad. Econ.* chap. xiii, § 1, vol. ii, pp. 336, 347.

ments of married life, that they might indulge themselves in selfishness and sensualism. The corruptions of Roman society and of society in France, England, and the northern States were identical; they manifested themselves in the former as they now manifest themselves in the latter communities: in all greed, rapacity, and the utter disregard, practical and theoretical, of the marriage relation have been significant phenomena. In the southern States these vices exist only to a limited extent as fatal imitations of the follies of a different social organization. Was it slavery that produced in Rome and Europe the opposite recommendations of policy, and the identical result, but did not occasion any such measures or effects in modern slaveholding communities?

It is not true that slavery produced depopulation, or displaced the free laborers in the ancient world. These were concurrent, and perhaps connected phenomena, but slavery was not the prime cause of the evil; it was only a partial effect in common with the other effects of a higher cause. That cause was rapacity, and the intestine strife which it generated. The Peloponnesian, the Theban, the social wars, the Macedonian conquests, and the rivalries of the successors of Alexander; the campaigns of the Ætolian and Achæan leagues, and the rest of the long series of domestic discords, depopulated Greece—and there is no period in its history when it can be said that free labor was displaced by slavery. This would have been an inversion of the course of social development. With the progress of society free labor supplants slavery, as being less costly, more intelligent, and therefore more efficient in occasioning the multiplication of products. The deficiency of labor is the preliminary condition of slavery; the augmentation of labor is the parent of inevitable emancipation; therefore, unless labor be deficient, slavery can neither come into existence nor continue in vogue. It is a direct corollary from these principles that slavery cannot displace free labor, and cannot of itself be a cause of depopulation; and that, therefore, it did not generate these effects in the Roman empire.

The abstract deduction of this conclusion from general principles may be resisted as being theoretical. We will recur to history and facts. Under the Roman government there is no evidence of the displacement of free labor by slavery. The free laborers disappeared unquestionably, and slaves filled the places that had been abandoned, or never occupied. But it is an assumption to represent the latter as the cause, and the former as the effect. The greed of the wealthy monopolized the public lands, and depressed the mass of the

citizens, but it was not slavery that produced this rapacity, for the same tendencies are manifested by the landlords and manufacturers of Great Britain,* and the capitalists of France, and even of the free States of northern America. No such tendency is yet distinctly pronounced in the southern States. The free laborers of Rome disappeared, but it must be ascertained what became of them before it can be properly asserted that they were displaced by the slaves. Our anti-slavery professor gives the Gracchi great credit for their efforts to avert the dangers of slavery and create an independent yeomanry as a check on the wealthy aristocracy, and their monopolizing appetencies. We assent to the latter part of the eulogy; to the former part we do not assent. When the younger Gracchus harangued the people, a slave stood behind him with a life to give him the proper key in which to pitch his voice. Caius Gracchus was scarcely dreaming at that moment of abolishing or mitigating slavery. What the legislation of the Gracchi really was, what its objects, and what its effects, exercised the industry and research of Niebuhr, and cannot be satisfactorily expressed in the brief summary of a couple of sentences. Slavery had little or nothing to do with it; but one of the consequences of the Sempronian laws, apprehended by their opponents, was to seduce the poorer citizens from industrial avocations, and thus leave a vacancy which was soon filled by slaves.† We prove this point by direct citation from the classics; we shall not borrow at second-hand, nor trust to Becker and Blair, and Walton, and Edwards—(“Powers eternal! such names mingled!”) The rapacity of the rich and powerful was imprudently counterbalanced by the gratuitous distribution of support to the poorer citizens, and this temptation withdrew them from labor. The provisions of the poor, as the exactions of the proconsuls and proprætors, were drawn from the plunder of the conquered provinces; and thus the whole earth was despoiled and impoverished to satiate the

* The proprietors of land in England, Scotland, and Ireland are estimated at only 30,000 by Dove.—Theory of Human Progression, chap. iii, sect. iii, p. 358.

† “Agrariam Ti. Gracchus legem ferebat. Grata erat populo; fortuna constitui tenniorum videbantur. Nitebantur contra optimates, quod ea discordiam excitari videbant: et quum locupletes possessionibus diuturnis moverentur spoliari rempublicam propugnatoribus arbitrabantur. Frumentariam legem C. Gracchus ferebat. Jucunda res plebi Romanæ. Victus enim suppedtabatur large sine labore. Repugnabant boni quod ab industria plebem ad desidia avocari putabant, et ævarium exhauriri videbatur.” Cic. Or. pro Sextio, c. xlviii, sec. 103.

The slave-holders opposed these laws, because the effects would be the reverse of what the professor represents, and would do what he ascribes to slavery, abolish free labor and impoverish the state.

covetous idleness of the Romans, patrician, plebeian, and proletarian.* Luxury and avidity, bribery and laziness, impoverished the world, and substituted slavery only for the free labor which had already renounced work. It was the licentious greed, the peculating and hungry indolence of the Romans that destroyed the free labor of Italy.†

The essay on the Athenian Republic, the Dialogues of Plato, and the remains of the Attic Comedians, explain the manner in which the Athenians were tempted away from industrial pursuits by the various distributions to them of the public revenues. The Athenian Demos consumed in haughty and reckless idleness the funds which should have sustained the defences of the state; and the forces of the republic were in consequence unprofitably employed in plundering and alienating the allies, instead of resisting Spartan, Asiatic, or Macedonian aggression. The decline of Athens and the other Greek states is perfectly intelligible, without having recourse to the imaginary influences of slavery; nor is there anything in either the ancient authors, or the political conditions and phases of their decay, to render it necessary or even reasonable to attribute the result in any great measure to slavery.

In the case of Rome we witness the repetition of the same destructive agencies which overthrew the liberties and prosperity of Greece, and which have in all cases been the principal causes of national decline. It is ridiculous to listen to the arguments of modern abolitionists, and to hear them citing the laws of the Gracchi as ineffectual attempts to repress the growth of slavery, when measures, identical in spirit, similar in form, and much more extensive in their application than the system of land distribution assailed by the Gracchi, are recommended and urged by the ultra political economists of Great Britain as a redress for the existing evils there. The Roman system, which the Gracchi impugned, was to retain the ownership of the greater part of the conquered lands in the hands of the state, and to lease out the lands themselves to individuals. The system lately recommended by Mr. Dove and Mr. Herbert Spencer‡ is for the

* C. Gracchus, on his return from Sardinia, remarked: "Itaque, Quirites, cum Romam profectus sum, zonas, quas plenas argenti extuli, eas ex provincia manes retuli. Alii virii amphoras, quas plenas tulerunt, eas argento repletas domum reportaverunt." Aul. Gellius. Noct. Alt., lib. xv, c. xii, sec. 4.

† This explanation is fully sustained by Sallust: Cat. c. x-xiii. Fragm. Hist. ap. Augustin. Civ. Dei. lib. ii, c. xviii. Montesquieu, Grandeur et Décadence des Romains, ch. x.

‡ Dove, Theory of Human Progression. Dove, Elements of Political Science. Spencer, Social States. To some expedient of the sort Proudhon also seems to be inclined. Extremes meet.

state to assume the ownership of all lands and to hire them out to the highest bidder. Either the early Roman plan was not intrinsically wrong, while the Gracchi were, in which case the eulogy of the Gracchi is absurd, or the Gracchi were right; but the modern abolitionizing political economists are wrong, and therefore contradict the doctrine they assert. They are thus suspended on the points of a dilemma; they can turn neither to one side nor to the other without confusion and inconsequence; but whatever their option may be, slavery has nothing to do with the determination of the question, as this has equally arisen, and elicited contradictory solutions where slavery did and where slavery did not exist. The entire logical procedure of the abolitionists is involved in an inextricable maze of absurdities, inconsistencies, and misapprehensions, and its only evidence is a long array of unauthenticated or mistaken facts.

Slavery did not, as has been habitually asserted, depopulate the Roman territory and undermine agriculture. It was an accompaniment of these results, but not a cause, or, at any rate, only a subordinate and co-operating cause. The professor, to whom we are ostensibly replying, repeats the lesson he has learned from the frequent teaching of others, that "the ravages of this war," (with Spartacus and the insurgent slaves,) "were so great that Italy can hardly be said to have recovered from its effects during the time of the emperors. The free population was almost entirely extirpated, and the region divided into large estates, which mainly served for pasturage." "From the time of the civil wars, slavery went on slowly maturing its ruin. It impoverished the land, so that Rome was dependent on the granaries of Africa for her bread."

If the slaves in a servile war extirpated the free population, it should be obvious that free labor was not destroyed by the substitution of slave labor. But we waive any captious advantage that might be derived from looseness or inaccuracy of expression. It is solely from considerations of convenience that we quote from the professor's essay. We oppose the statements and arguments adduced by him, not as being his, for they are nearly as common property as air and running water, but because we must take them from some creditable hand. He only serves at present as the man of straw, that our arrows may not fly without being directed at some mark. We no more think of censuring him individually than we would of punishing a child who had stumbled over a broken bottle and lacerated himself by the mischance. What we are contending against is a bundle of popular arguments and

vulgar delusions which we find in the professor's industrious compilation, as almost everywhere else.

Now we venture to assert that the desolation and depopulation of Italy were not due to the servile wars, whatever temporary evils they may have inflicted; that Italy did recover, not merely from their effects, but from its first great devastation, in the time of the emperors; that it was not by these wars that the free population was extirpated, nor in consequence of them that southern Italy was divided into large estates, or that these were converted into pasture. The ground first assumed is abandoned when the alleged disastrous effects of slavery are dated from the civil instead of from the servile wars; nevertheless, we also venture to assert that the agriculture of Italy was not destroyed by slavery, and that it was not slavery which rendered Rome dependent upon Africa for bread.

We believe we have traversed every statement, not only in form and manner as alleged, but in spirit as intended; and have produced a long array of historical blunders. They are excusable, for they are traditionary; and tradition is a horrible offence in many eyes. But there is not the same excuse for the professor's representation, that it was in consequence of the humane effect of Christian laws that the church became a sanctuary for the slave of a cruel master, after having stated that Antoninus had previously introduced a similar practice; nor for attributing this beneficent measure to Antonine, when the like privilege was already established at the commencement of the reign of Nero.*

We proceed to maintain our numerous traverses. The civil wars of Marius, and Sylla, and Carbo, their proscriptions, decimations, and devastations, succeeded the first servile war. The war with Spartacus was followed by the conspiracy of Catiline and its consequences, and by the bloodshed, proscriptions, disasters, and exterminations of the first and second triumvirates. It was to the struggle between Pompey and Cæsar that the ancients attributed the depopulation of Italy.† It produced throughout the Roman dominions even greater desolation than the war of the roses afterwards occasioned in England. The population had been rapidly diminishing from various causes before, but this completed the disaster. If the object of Julius Cæsar's celebrated

* "Servis ad statuam licet confugere," &c.—Seneca, De Clement, lib. I, chap. xviii, sec. 2.

† Not one word of Spartacus and slavery! Cicero had noticed with alarm, and endeavored to remedy, the defect of population—"Italiæ solitudinem"—as early as A. D. 60, (Cic. ad Alt. I, Ep. xix;) but this was subsequent to the proscriptions of Sylla, &c.

decree, enacting that one-third of those employed in pasturage should be adult freemen, had been principally designed to produce an independent class of free laborers, and to repress the advances of slavery, he would neither have commenced nor contented himself with such an ineffectual measure. It seems rather to have been part of the general policy pursued by the Julian laws in favor of marriage and the purification of the annonarian lists, and to have been designed to diminish the pressure of taxation and increase the military strength of the State by multiplying the free population.*

But from its first devastation Italy did recover, notwithstanding slavery and the vast estates of the wealthy. Hume's essay on the populousness of ancient nations is one of the most sensible and satisfactory dissertations which have been written on the social condition of antiquity. In this he observes, "Were I to assign a period when I imagined this part of the world might probably contain more inhabitants than at present, I should pitch upon the age of Trajan and the Antonines; the great extent of the Roman empire being then civilized and cultivated, settled almost in a profound peace, both foreign and domestic, and living under the same regular police and government."† This is amply confirmed by the authorities cited in Hume's note;‡ and by the fact that nearly all the great remains of Roman architecture throughout the distant provinces belong to this age. Niebuhr does not give an equally favorable account of the increase of the population at this time, attributing its failure to increase to the ravages of the plague, but not to slavery.§ In this chapter, however, either from his own haste, or the carelessness of his reporters, Niebuhr is frequently at variance with his authorities. The age of the Plinies and Tacitus was not an age of Italian depopulation.

It was not in consequence of the servile wars that Italy was divided into large estates. Such a distribution of the

* Vide Dion Cass., lib. xxxviii, c. i, c. vii.

† Essays, Moral, Political, and Literary, Part ii, Ess. xi. Hume's Philosophical Works, vol. iii, pp. 487-8. Boston.

‡ Ælius Aristides, and Tertullian De Anima, c. xxx. The latter says: "Certe quidem ipse orbis in promptu est, cultior de die, et instructor pristino. Omnia jam pervia, omnia nota, omnia negotiosa. Solitudines famosas retro fundi amenissimi oblitteraverunt, silvas arva domuerunt, feras pecora fugaverunt, arenæ seruntur, saxa pangunter, paludes eliguantur, tantæ urbes, quantæ non casæ quondam. Jam nec insulæ horrent, nec scopuli terrent; ubique domus, ubique populus, ubique respublica, ubique vita. Summum testimonium frequentis humanæ, onerosi sumus mundo, vix nobis elementa sufficiunt."

§ Lect. on History of Rome, Ed. L. Schmitz, Lect. lxxi, vol. ii, p. 288, London, 1844.

soil must have prevailed before such large bodies of renegades as fought under Eunus and Spartacus could have been collected, or could have operated with any success. Insurgent slaves are only formidable in the midst of a sparse free population. Moreover, the grievances proposed to be relieved by the Agrarian laws, and the dissatisfactions which led to the Agrarian rogations, were of earlier date. Pliny's remark is perfectly true, "latifundia perdidere Italiam;" but the commencement, continuance, and extension, of these latifundia, or immense estates, like the Duke of Sutherland's or the Duke of Athol's, may be attributed to greed, luxury, fraud, peculation, plunder, extortion, and oppression, but not to slavery. The remark of Pliny, and all the consequences that may be drawn from it, are still applicable to modern Italy, though the brilliant period of the prosperity of the Italian republics has intervened, and slavery has long ceased to exist. What Pliny remarked in antiquity Niebuhr himself discerned in the condition of the Roman Campagna.*

A glance at the map will be more effectual than antiquarian research in explaining why southern Italy was used principally as a pasturage. With the exception of the rich plain of Campania, and a small part of Apulia, this whole region was a rugged and mountainous country. The sheep and horses were wintered in the Apulian plains and the rolling lands of Calabria, where the spurs of the Apennines sink down into trifling undulations; and in summer, when the streams of the low land were dried up, they were driven to pasture in the mountains of Samnium and the Abruzzi. A tax was paid for the use of these rugged pastures, which appear to have been retained in the possession of the state. It will be sufficient proof of the character of the countries, said to have been divided into large pasture farms in consequence of the servile wars, to refer to the articles, "Apulia," "Bruttii," "Calabria," in the valuable Dictionary of Ancient Geography recently edited by Dr. Smith. We may add the testimony of Cassiodorus, a native of the extreme southern district of Italy, to the fact that Lucania had always been a cattle country, and the Bruttii a hog range, but that the vine culture had been subsequently introduced with success.† We may mention, too, that this section of Italy does not

* Niebuhr's *Life and Letters*, Lett. ccli, cccli, pp. 377-8, Am. Ed. of Mill. Pol. Econ. Introd., vol. 1, p. 25, 1st Engl. Ed., though he introduces in part the explanation of slave cultivation.

† "Huic enim fuit ut montuosa Lucania sues penderet; huic ut Bruttii pecus indigena ubertate præstaret. Fuit nimirum utrumque mirabile; ut et provinciæ tanta civitati sufficeret, et sic ampla civitas earum beneficiis victualium indigentiam non haberet." xi. Var. xxxix.

appear to have been divided into large estates soon after the servile wars, but to have remained undistributed public domain; and that the ancient use of it as pasture, ascribed to slavery, still continues in the modern kingdom of the Two Sicilies, though slavery is extinct. The professor and his friends are unfortunately mistaken, even in the most trivial incidents of their statements.

So far from the destruction of human life in the war with Spartacus having occasioned the conversion of southern Italy into a great pasture ground, it was employed in this way about 112 years before that war, and fifty years before the devastations of any of the great servile wars. To this point we have the direct testimony of Livy, given in connexion with the mention of an insurrection of the slaves in Apulia, which broke out A. C. 185.* Moreover, the materials of a servile war would not have existed unless slaves had been already numerous; slaves could scarcely have been numerous out of the large cities except in a country farmed on a large scale; and these large farms must have been in process of formation before slavery became very extensive. The vast agricultural operations of southern Italy must, therefore, have preceded the servile wars; and their extension must have proceeded at least contemporaneously with, and not subsequently to, the increase of slavery. Thus the logic and the learning—the philosophy and the history—adduced by the professor and his compeers, are equally at fault.

We have deferred as long as possible the consideration of the decline of agriculture in Italy, because it was necessarily connected with, and consequential on, the decay of the population. But we are now prepared to show, in the teeth of reiterated asseverations to the contrary, that agriculture was not destroyed by slavery, and that it was not slavery which “impoverished the land, so that Rome was dependent on the granaries of Africa for bread.”

If slavery were absolutely fatal to agriculture, it would be perfectly incomprehensible how the two great slaveholding states of antiquity, Carthage and Rome, should have carried agriculture to such a high degree of refinement that the modern cultivation of the soil, even in England, has scarcely yet obtained to the excellence of the ancient; and that many of the most recent agricultural improvements should have been practised by the Carthaginians and Romans; and described by Palladius and Columella, and probably by Mago,

* “Magnus motus servilis eo anno in Apulia fuit. Tarentum provinciam L. Postumius, prætor, habebat. Is de pastorum conjuratione, qui vias latrocinus paucaque publica infesta habuerunt; quæstionem severe exercuit.”—Livy. lib. xxxix, c. xxix, §§ 8, 9.

from whose great work, translated from the Punic into the Latin under a commission from the Roman senate, the *Scriptores Rei Rusticæ*, or chief agricultural authors of Rome, principally derived their prescriptions. This is admitted and proved by the English writers themselves—and especially in a very interesting notice of Stephens' *Book of the Farm*, published a few years ago in one of the magazines or reviews. We have not the article before us, but believe that it appeared in *Blackwood*. How is it, also, that the agriculture of the southern part of the Union is so much more productive, efficient, and progressive, than that of the northern States, where so much more of the appliances of wealth, and of the means for the amelioration of the soil, are available?

This is a stumbling-block, which must be stumbled over—it cannot be removed. Let it be noted, too, that the period of the highest development of ancient Italian agriculture was subsequent to the Punic wars, and the destruction of Carthage—therefore, posterior to the multiplication of slave labor—and even posterior to the servile wars, which are alleged to have destroyed the culture of the soil. And it may be pointedly asked, at what era anterior to the establishment or extension of large estates and slave cultivation, the agriculture of Italy was equal to its condition in the days of Cicero, Augustus, Trajan, or even Theodoric, the Goth.

We do not deny the injurious effects of the *latifundia*, but slavery was merely the instrument, and not the cause, of the mischief. Nor was it by any means an indispensable instrument of the evil thus produced—for the same process of land appropriation, and the same prospect of ulterior calamity, are advancing in England without the presence of slavery. The system was ruinous. It was a desperate condition of society when six families owned the half of Africa,* and when even satire could represent the boastful Trimalchio as saying that one of his farms extended from Terracina to Otranto, but that he proposed to annex Sicily to it, that he might sail through his own domains on his visits to Africa.†

* "Verumque fatentibus latifundia perdidere Italiam: jam vero et provincias. Sex domi semessem Africa possidebant cum interfecit eos Nero princeps."—*Plin. Hist. Nat.* xviii, c. vii, v. *Sismondi Etudes sur l'Econ. Pol.*

† "Dicitur confine esse Taracinensibus et Tarentinis; nunc conjungere agellis Siciliam volo, ut cum Africam liberit ire, per meos fines navigem."—*Petron. Satyr.*, c. xlvi. The irony is very delicate and keen; but the moralist, Seneca, writes: "Quousque fines possessorum propagabilis? Ager uni domiro, qui populum cepit, angustus est. Quousque avatrones vestras porrigities, ne provinciarum quidem spatio contenti circumscribero prædiorum modum? Inlustrum fluminum per privatum decursus est: et amnes magni magnasumquo gentium termini usque ad ostium a fonte vestri sunt. Hoc quoque parum est, nisi latifundus vestris maria ciuxistis, nisi trans Hadriam et Ionium Æquanque vester vilicus regnat,

On the same wealthy gentleman's farm at Cumæ, we are informed, that thirty girls and forty boys, slaves, of course, were born on the 26th of July. This does not look much like the depopulating effects of slavery; but no determinate inference can be drawn from the exaggerations of a caricature. On the same 26th of July, and on the same farm, 125,000 bushels of wheat were housed, and 500 oxen broken to the yoke.* Imperial tyranny, however, destroyed these wealthy landowners, and first confiscated, and then dissipated, their estates;† but fraud, rapacity, and chicanery, again monopolized the soil, until Ammianus Marcellinus could speak of private domains stretching across the world, and on which the sun never set.‡ The same tendencies are manifested in Great Britain, which, with Ireland, is divided between some 30,000 proprietors, some of whom measure their estates by the score of miles, and possess whole counties. But the agricultural distress of France is perhaps still greater. In 1847, there were nearly five and a half millions of landowners,§ burdened with mortgages on their real estate to the amount, in 1849, of \$2,500,000,000, and paying annually \$250,000,000 in interests and taxes, retaining only \$150,000,000 for the expenses of cultivation, and the subsistence of the landed interest.|| Slavery is not, therefore, the cause of the monopoly of land, as this is not any peculiar characteristic of slave States; nor is land monopoly the sole cause of agricultural decay, as the same result may be generated by the extreme division of property. The argument of the censors of Roman slavery breaks down hopelessly at every step.

What then occasioned the decline of agriculture, not in Italy alone, but throughout the Roman empire? We answer, the foreign conquests of Rome; the bribery of the people by the magistrates, who sought office or advancement for the sake of extortion, and impunity for their lawless gains; the gratuitous distribution of provisions, which drew the population to Rome and maintained them in idleness—a practice after-

nisi nisulæ, ducum domicilia magnorum, inter vilissima verum numerantur. Quam vultis, late possidete. Sit fundus, quod aliquando imperium vocabatur."—Ep. lxxxix, § 20. For his own part, Seneca preferred usury to lands.

* Petron. Satyricon, c. liii.

† Tac. Ann., lib. iii, c. lii.

‡ "Alii, nullo quærente, vultus severitate adsimulata, patrimonia sua in mimensum extollunt, cultorum ut puta feracium multiplicantes annuos fructus, quæ a primo ad ultimum solem se abunde jactitant possidere."—xvi, vi, § 10; c. xxvii, xi, § 1; xxix, § 25.

§ Mills' Political Economy, vol. i, p. 576. Appendix. 1st Engl. ed.

|| London Times. We have not preserved the date of the paper.

wards extended to the other great cities; the fiscal exactions and the fiscal abuses; the increasing power and the increasing greed of capitalists and adventurers; the oppression and merciless treachery with which the poor, the peaceable, the honest were everywhere treated; and the systematic plunder of the weak by rich neighbors and unprincipled officials. To establish all these points satisfactorily would require the history of the Decline of the Roman Empire to be re-written with a research, fidelity, and minuteness which are not to be found even in Gibbon, and which are not promised nor suspected by M. Merivale. We can only prove the main point, that the decay of agriculture was not due to slavery, and show the original cause to which it was due.

We suppose that the authority and formal declaration of Augustus will be sufficient for this purpose, especially when they only confirm what might have been anticipated from the statements of Cicero, Livy, and Tacitus. Suetonius apprises us that Augustus had recorded in his memoirs of his own times that, "at a period when provisions were abundant, he had designed, and begun to attempt the complete and perpetual distribution of grain to the Roman people because the reliance on these gratuitous supplies had produced the abandonment of agriculture. He did not prosecute his design, because he was convinced that the distribution of provisions would be re-established by the ambition and bribery of those who might come after him. Accordingly, he afterwards prosecuted his policy with such moderation as to show no less consideration for the land-owners and traders than for the mass of the people."* This evidence is ample and direct; the authority is the very highest that the nature of the case admits, or that could be required. But the decline of cultivation was not occasioned at this time by either land monopoly or slavery, for much of Italy was without owners, and unoccupied even by slaves. This is manifest from the advice to Augustus which Dion Cassius puts in the mouth of Mæcenas.† He recommends that monarch to sell the property which had accrued to the treasury, and which had been swelled by the confiscations of the civil wars, and to lend the proceeds on moderate interest to enterprising persons who would themselves engage in agricultural operations, for the purpose of extending cultivation and improving the waste and public lands. It was principally intended as a financial measure to sustain the revenue, as is obvious from the text of Dion Cassius. The advice has been taken by the English

* Sueton Vit. octav., c. xlii.

† Dion Cass., lib. lii, c. xxviii.

government, though chiefly for the benefit of land-owners, capitalists, and speculators. The Irish waste lands improvement bill in form, if not altogether in spirit, accords with the recommendation of Mæcenas. His suggestion is also incorporated in the French Société du Crédit Foncier de France, and is repeated in an exaggerated type by M. Dove, in the remedial policy which he proposes for Great Britain.* Whatever efforts may have been made by Augustus to rehabilitate Italian agriculture, they must have been frustrated by the tyranny and inordinate license of his immediate successors; and whatever ameliorations may have been introduced by the reigns of Trajan and the Antonines, they must have disappeared in the civil wars and under the tyrants of the succeeding century. To other causes of decay, moreover, must be added the persecution of the Christians, the most moral and industrious citizens of the empire.

Pertinax resumed the policy suggested to Augustus. He found Italy, not in the hands of large proprietors, who had been industriously assassinated by Commodus, nor occupied by slaves to the exclusion of free laborers, but desolate, and much of it escheated to the state. He offered a free grant of public lands, and exemption from taxation for ten years, to those who would reclaim and cultivate the abandoned soil.† But Pertinax reigned only eighty-seven days, and his laws were abrogated. Aurelian endeavored to settle and again reduce to cultivation the neglected lands in the rich plains of Lombardy.‡ What was wanting was men to cultivate them, whether they were bond or whether they were free; though the free, and not slaves, were preferred, because the former were tax-payers. From this time onward the legislation was continually directed to the increase of agriculture; and, by way of encouragement, the Christian Constantine exempted farmers from the general prohibition of Sunday work.§ For three hundred years any one might obtain land for nothing, who would or could cultivate it; but owners deserted their lands, turned bandits, concealed themselves in the woods, or took refuge with the barbarians, to escape taxation and other exactions, public and private.|| It was not slavery, but the

* Elements of Political Science.

† Herodian, lib. ii, c. iv, §§ 12, 33.

‡ Vopisci, Vit. Aureliani, c. xlviii. This, too, was a fiscal measure. The great effort of the emperors, the insoluble problem of the times, was to keep up the taxes, and the ability of the people to pay them.

§ Cod. iii, xii, 2, (3) A. D. 321. The privilege was withdrawn by a novel of the Emperor Leo.

|| Salvian de Gubernat. Dei. lib. iv, c. viii, p. 104. Ed. Baluzer. Cod. Justin, xi, xlviii, (xlvii.) Fr. Baldunius, in Legg. De Re Rustica, Schol. pp 1239-41. The illustrious Hallam, to the contrary, notwithstanding!

vices of individuals and of the state, fraud and fiscal extortion, civil wars and barbarian inroads, which destroyed the agriculture of the ancient world. The moment any thing like an orderly and merciful government was restored, capable of repressing the iniquitous practices of the treasury officers, and the cruel enormities of the rich and the powerful, and competent to resist at once foreign aggression and internal discord, agriculture revived without the abolition of slavery; and under Theodoric, the Goth, the Pontine marshes were drained by private enterprise,* and Italy exported grain.†

During the whole period of the decline of ancient civilization, slavery was so far from extending free labor, which did not exist to any extent, that the inclination of the slave-owners was to emancipate their slaves, for the sake of being relieved of the expense of their maintenance, and of being benefitted by their freedom. Laws were passed by Augustus to restrict the tendency to emancipation;‡ these were re-enacted and extended by later emperors;§ but so strong was the desire of the wealthy to disburden themselves of the support of their slaves, that it was during this very period, and by the operation of individual interest, that slavery was almost universally transmuted into predial servitude. Serfdom was a Roman and not a Teutonic institution.||

The management of their slaves by the ancients was calculated neither to prevent free labor, nor to multiply slaves. They were not merely discouraged from marrying, but their natural increase was prevented with a systematic precision and success which might have delighted Malthus, and was only imperfectly imitated in the Spanish West Indies. This was amply proved by Hume,¶ but has been forgotten by more recent writers, with the rest of his sagacious political discoveries. Hume, too, may substantiate the last of our nega-

* The contemporary inscription commemorating this success is preserved. Nicolaj, *Delle terre Pontine*.

† Cassiod, *Var. iv, v. Sartorius, Sur les Gouvernement des Goths, c. x, p. 173*. Sartorius says, p. 170: "les contemporains de Théodoric rapportent des faits incontestables qui prouvent que, de leur temps, l'agriculture prospérait en Italie." He denies, p. 167, the applicability to Italy, after the usurpation of Odoacer, of the maxim, *latifundia perdidere Italiam*—and attributes, p. 170, its desolation to the want of laborers of any sort.

‡ Sueton. *Vit. Octav. c. xl. Montesquieu, De la Grand. and De'cad. des Romains, ch. xiii.*

§ Chastel, *Sur l'Influence de la Charité, 80, liv. i, chap. iii, pp. 117, 118.*

|| This may appear a bold assertion, but it is justified by *Dig. xxx, i, § 112. Cod. Just. iii, xxxviii, § 11, xi, xlvi, (xlvii,) §§ 2, 7, 11, 13, viii, xvi, (vii,) § 7, par. 8. (Re-enacted by Frederick Barbarossa). Legg. Rusticæ, i, § 17, et Fr. Balduinus, ad loc. Salvian, De Gubernat. Dei. lib. iv, c. viii, p. 106. Procop. De Bell. Vandal. lib. i, c. v, vol. i, p. 333-4.*

¶ *Populousness of Ancient Nations. Phil. Works, vol. iii, p. 419, 430.*

tions of the professor's statements, that slavery rendered Rome dependent upon Africa for bread.

"When the Roman authors complain that Italy, which formerly exported corn, became dependent on all the provinces for its daily bread, they never ascribe this alteration to the increase of its inhabitants, but to the neglect of tillage and agriculture; a natural effect of that pernicious practice of importing corn in order to distribute it gratis among the Roman citizens, and a very bad means of multiplying the inhabitants of any country."* This, with the evidence incidentally supplied by our previous remarks, seems to corroborate sufficiently the last of our traverses; but we may ask whether it is slavery, or free labor and free competition, which prevents Great Britain from raising her own grain, and compels her to import large supplies of breadstuffs from slave-holding Turkey, Russia, and the southern States of the Union? We would ask, too, whether it is slavery which has reduced the Irish to a diet of buttermilk and potatoes, or converted the Highlands of Scotland, first into sheep-walks, and now into game-preserves? Despite of the presence of slavery, ancient Greece seems to have supported a denser population than any part of Europe has since been able to do, with all the advantages of freedom.

We believe that we have sustained all our assertions. It has taken us much longer than we anticipated, and has required more research and minute investigation than we had foreseen; but we intended to perform our task effectually, though with brevity, and without entering into details that might be avoided. Error, however, grows and multiplies in proportion to the care with which it is examined, and the positions which we have been engaged in refuting express or imply almost as many fallacies as they employ words for their utterance.

There is only one more point which we have undertaken to notice. This is exhibited in the current formula: "It was this system of slavery that, more than any one other cause, hastened the downfall of the Roman empire." After all that has been already advanced it is unnecessary to disprove this assertion, although it is bolstered up with the very respectable name of Guizot. It might have claimed the equally respectable countenance of Robertson, and the not very respectable testimony of Milman. This is not the interpretation which Tacitus, and Salvian, and Zosmius give of the ruin of the empire; nor is it the interpretation given by the facts.

* Populousness of Ancient Nations. Hume's Phil. Works, vol. iii, p. 487.

But we will not plunge again into the mists of antiquity, but simply inquire whether it is in consequence of the corrupting influences of slavery in western Europe that France has reached such a state of wretchedness that M. Blanqui reports to the French Academy its incurability during the present generation;* and that M. Chevalier describes it as a yawning abyss, opened by hate, and threatening to engulf all classes and all parties.† Is it slavery which has bequeathed to "Merrie England," or impressed upon her lovely face these beautiful traits: "The demoralization of the population is England's greatest danger; and if not met in time by means of moral and intellectual training it may produce the direst evils and make England a manufacturing hell."‡ "The whole system of modern manufacture, with its factory slavery; its gaunt and sallow faces; its half-clad hunger; its female degradation; its abortions and ricketty children; its dens of pestilence and abominations; its ignorance, brutality, and drunkenness; its vice in all the hideous forms of infidelity, hopeless poverty, and mad despair—these, and, if it were possible, worse than these, are the sure fruits of making man the workman of mammon, instead of making wealth the servant of humanity for the relief of man's estate."§ This portrait of British society is drawn by a Scotchman—the distinguished secretary of the Scottish Association for the Rights of Scotland—no slaveholder, but an abolitionist. Is it slavery which has rendered the conjoined arms of England and France impotent against the fortresses of slave-holding Russia, who has defended herself successfully for two years with arms in the hands of serfs, directed by the nefarious owners of human flesh and abominable slave masters? If slavery was the grievous and fatal curse of the Roman empire, civilized Europe has in modern times discovered a curse equally effectual, and productive of the same results, after the abandonment of slavery. There is certainly a screw loose in the logic somewhere, as well as something rotten in the state of Denmark. M. Dove has, perhaps, discovered the true secret of both ancient and modern decline, when he refers the movement of the machinery of destruction to the "making man the workman of mammon, instead of making wealth the servant of humanity for the relief of man's estate." We

* *Journal des Economistes*, No. 95, 15 Mars, 1849, p. 411. Rapport à l'Académie, &c., 3 Mars.

† *Journal des Economistes*, *ibid.*, p. 350.

‡ *The Theory of Human Progression*. By P. E. Dove, ch. I, sec. ii, p. 67. Note.

§ *Theory of Hum. Progr.*, ch. II, sect. ii, p. 241.

cannot compliment him on the remedial measures propounded by him, for he seeks his *materia medica* in the poisons which have prostrated the patient.

We have nothing at this time to say in favor of ancient slavery, neither have we anything to say against it, although fully conscious of its gross enormities, barbarities, and excesses, as we are also aware that there is ample room, at a suitable time, for the mitigation, amelioration, and regulation of African slavery. These points, however, in no manner enter within the scope of our proposed task. We have simply undertaken to challenge received dogmas, and to show that the effects attributed to ancient slavery were not produced by it, but by the operation of other and much more general influences. How far slavery may have co-operated to accelerate or retard, to augment or counteract, to alter or modify the evils with which it was accompanied, is an inquiry foreign to the contemplated discussion. Our enterprise was of a purely negative character; and we hope it has been executed in such a manner as to leave no doubts behind, and to prove at the same time that the suitable examination of the slavery question in any of its subdivisions cannot be conducted by blind adherence to any set of traditional opinions, but requires much more penetration, research, philosophy, and learning, than has been usually vouchsafed either by or to the assailants of the system.

The professor, whose words we have unceremoniously borrowed, has no reason to complain of the treatment of his arguments. He is only one sinner among many who have gone astray; he has only followed the multitude to do evil; he has been betrayed into an almost universal delusion, and can boast of illustrious colleagues in error. Epistemon, on his return from the infernal regions, reported that there was excellent cheer below, and that he had found the devils jolly companions, though the great men of the earth were discovered prosecuting strange avocations, and Alexander the Great was busily employed in earning a poor subsistence by patching old clothes.* The professor may make a similar report in relation to those who have long passed away from the scene, after having travelled the same beaten path which he has himself pursued. To us, the respectability of the heretics was the chief temptation to test the heresy. "One built up a wall, and lo, others daubed it with untempered mortar; say unto them which daub it with untempered mortar, that it shall fall; there shall be an overflowing shower, and ye,

Rabelais, lib. ii, c. xxx.

O great hailstones, shall fall; and a stormy wind shall rend it.

We have not been deterred by the portent of great names from attacking the wall; because with the conviction of truth and right, of reason and evidence, of philosophy and history on our side, we were not afraid of the sounding brass and tinkling cymbals of great names or popular delusions. Jack Davis, or somebody else, according to Charles Lamb, was in the habit of saying that he would have fought the devil with such odds as Achilles had in his combat with Hector; we believed that our odds were equally great in the present discussion, and we were, therefore, not alarmed by the name of Guizot, or by the hosts of others whom we knew to be at Guizot's back.

There is only one further duty to be performed. It seems advisable to present a brief summary of our conclusions. We believe that we have shown the history of slavery and labor to be still unwritten, and the acceptance of many unquestioned delusions on the subject. We have indicated our impression that slavery is not extinct, and is not likely to disappear from society; and have given a few reasons for considering it a natural and spontaneous institution, but liable like the other natural relations to abuse. We have pointed out misapprehensions connected with the origin of slavery, but have also maintained that its character is not affected by the occasional improprieties of its origin. We have waived and refused any inferences from the propriety or impropriety of one type of slavery to the justice or inexpediency of another, and have confined our criticism to the estimation of the allegations employed in the condemnation of slavery among the ancients. Under various forms, and at every turn, we have exposed the absurdity and inconsistency of the polemics of abolitionists on this subject; elucidating their awkwardness in the management of weapons which they cannot wield, and warning them of the dangers to which they are exposed in playing with sharp instruments, whose edge and point are turned towards themselves. We have maintained that labor was not rendered disreputable in antiquity by slavery; and that there is little real difference between ancient and recent times in the respect shown to manual industry; that it was not by slavery that the citizens of antiquity were degraded, and its states impoverished; that it is a mistake to suppose that slavery produced depopulation, or displaced the free laborers; that agriculture was destroyed by other influences; that it was not the servile wars which ruined Italy, and created monopolies of land and extensive pasturages; and that

other considerations and causes than slavery rendered Rome, (and the other large cities might have been mentioned in addition,) dependent on Africa, (and Italy,) for bread. We have also called attention to the fact that during the ages of Roman decline slavery was dying out; that the inclination of the times was to free labor, and that legislation was required to avert the dangers and miseries of selfish emancipation, but that, nevertheless, during this period, the tendency was so strong that it succeeded in converting, from interested motives, slavery into serfdom. We have examined every charge distinctly denounced against ancient slavery, of a political character, which was supported by the authentication of a respectable name, and which transcended questions of discipline, and every one we have found reason to consider unsubstantiated.

When Becker, and Blair, and Walton, and Edwards, and Guizot, are again accepted as authorities for an essay on Roman or ancient slavery, we hope that this supplementary chapter of doubts and difficulties may be deemed worthy of being employed as an appendix to their learned labors.

LAW AND LAWYERS.—BY THE EDITOR.

No IV. (Concluded.)

CHARACTER OF THE LEGAL PROFESSION—THE CHANCELLORS AND JUDGES OF ENGLAND, ETC.

To the law, as well as to the other learned professions, belong the esoteric and exoteric principles; and, perhaps, to the law pre-eminently belongs that wide and extensive field, in which the former is capable of being applied. Legal subtlety is proverbial. We have assigned, in another place, some of the reasons for its existence; we simply mention the fact here. Every day the recondite, the profound, the hair-splitting discrimination, are named among the essential elements of the legal profession. The fact is so; these form the inner divisions of the temple—parts too sacred for rude and vulgar profanation—reached only by avenues too dark and cheerless to invite a numerous priesthood. The portals of the temple are thronged with devotees—they are crowded and clamorous without—but where are those that tread in solemn awe its vaulted aisles—that press behind the dark veil—that penetrate the deep recesses, and offer up sacrifice upon the altar?

Lawyers are accused of an exceeding fondness for refined distinction—of an elaboration in their perplexed metaphysics—of an ever ready hand to draw nice lines of demarkation, and spin out cobwebs of subtlety from their brains. And, in

very truth, it required no ordinary mental power to be successful here. What skill, acumen and rigid intellectual training, must needs be brought into such a field! Well did Alexander Hamilton suggest Euclid as the lawyer's indispensable companion, and peruse it annually himself. The whole learning of uses, trusts and powers, when in their full vigor—what a formidable array! Who shall march up with firmness and nerve? Who shall do battle here, storm the high places and bear away the laurel of victory even from the enemy's camp?

We have, in the case of Sir James Hale, a passage of exquisite perfection in the discriminating art. Sir James had committed suicide. "The felony," said Mr. Justice Brown, "is attributed to the act, which act is always done by a living man in his life-time. Sir James Hale was dead, and how came he to his death? It may be answered by drowning. And who drowned him? Sir James Hale. And when did he drown him? In his life-time. So that Sir James Hale being alive, caused Sir James Hale to die; and the act of the living man was the death of the dead man." Shakspeare, in Hamlet, is supposed to have had reference to this very case, and admirably ridicules its refinement: "If I drown myself wittingly, wisely observes one, it argues an act, and an act has three branches—it is, to act, to do and to perform. Argal, she drowned herself wittingly; here lies the water, good—here stands the man, good—if the man goes to this water and drowns himself, it is will he, nill he, he goes—mark you that; but if the water comes to him and drowns him, he drowns not himself."

Next to legal subtlety, its technicalities and its fictions have afforded ground for much humorous representation and no little satire. Law Latin has been yclept a barbarous and mongrel growth, and law French an abomination. Yet is it from these precious and prolific sources that all those rare exotics are culled, which thrive so well in the soil and atmosphere of a court-house. If we consider its English, how very significant and intelligible the phraseology at times—"tenancy in tail, without possibility of issue extinct," "the whole of an undivided moiety," "an undivided moiety of the whole," et cetera; sensible enough to ordinary and unintiated intelligence! With respect to fiction, never let it be thought for a moment that good old lady common law has anything of a romantic inclination, because it pleases her once in a way to draw upon the imagination; her ideality is curious enough, and when she sketches a John Doe or a Richard Roe, what queer old-fashioned gentry they prove to be.

But then she never sketches simply for amusement ; her purposes in this field are higher ; she aims to be just, even when she would be most fanciful—boasting her old maxim, “in fictione juris consistat æquitas.” How prolific was her imagination in her earlier creations of “fines,” “recoveries” and “ejectments ;” and with what gravity, even in her fooleries, has she been wont to appear, and what wisdom in her assumed gravity withal. When she talked in her “levied fines” and “suffered recoveries,” about suits, compromises and adjustments, that had never taken place, was she telling downright deliberate lies to defraud, so that Sir Matthew Hale’s conscientious progenitor might be excused for abandoning her retinue forever ? Not at all. She was squinting terribly another way ; her eye was fixed upon those overgrown and enormous estates, which the nobility, by virtue of the “family statute,” *de donis*, were locking up from the nation, and in this way encouraging every kind of treason, stratagem and spoils. By virtue of a statute of Henry VII, came the “fine,” but clerical ingenuity, that fecund soil, had long before given the idea of the “recovery,” of which the judges did not scruple to avail themselves, and the politic Edward VI to wink at, in all good nature.

Let us take a momentary glance at this so celebrated “recovery,” now buried in the “tomb of the Capulets.” Tom brings an action against Dick for land, alleging that he obtained it from one Harry, who had turned him (Tom) out of possession ; whereupon Dick enters court, ready to swear upon his “bible oath” that the land is his, obtained from one Bob, and as to the said Harry, that he has never known him or even heard of him before. “Bring in Bob,” says the court ; and in steps this worthy, who proves to be none other than the crier. At this Tom looks aghast, but begs to have a little private parlance with him, which is granted, of course ; whereupon they strut out of court, arm and arm. Directly comes in Tom alone, but Bob is never seen or heard of afterward. Horrible ! could Tom have murdered him ? Nothing of this kind is proved. What thinks the court ? Say the judges, it is evident that the land is Tom’s, and this Dick and this Bob have been conniving together to oust him of his right and title, for has it not happened, they shrewdly ask, that at the very moment when Dick is to establish his title Bob, fearing the detection of his iniquities, has taken to flight ? The proof is positive. Now, what is the whole amount of the admirable farce ? Simply this—to allow land, by virtue of a voluntary agreement, to pass from Dick to Tom, barring all claim which the heirs tail of Dick might

have in it ; or, in other words, to permit alienation indirectly, which directly was contrary to the feudal policy. With such iron fetters was the nation bound, and so artfully was the work of manumission accomplished.

"The law's delay" has been everywhere the subject of song. To get into chancery is to live there, say some ; nay, it is often to take a fee simple right for the benefit of one's posterity. Then are there, too, its prolix documents—its never ending repetitions—its "said John's" and its "said William's," and its "deponents"—its quarto sheets loosely hieroglyphiced over and elegantly decorated with fancy tape. Save us from the "English bill" in chancery, with its "thrice told tale"—from all of these in mercy deliver us ! Who does not remember the great case of *Perrin versus Blake*, which for *thirty years* "awakened all that was noble and illustrious in talent and endowment through every precinct of Westminster Hall."

Ten persons once applied to a lawyer to have articles of partnership drawn up, which, had it been legally accomplished, would have required by calculation 90,720,000 provisos ; enough, one would suppose, to strike terror into every aspirant for legal eminence, and justify the reply made by a celebrated judge to a lady, who inquired if her son had much chance of success in this branch : "Yes, madam, if he can eat sawdust without butter !"

The growth of law libraries presents an interesting topic for investigation and comment, since their present enormous stature and unmeasurable proportions cannot but inflict many a pang on even the most hardy and indomitable. Many times the space usually allotted to humanity would not suffice even to enter upon their merits ; and he would be a reckless, daring lawyer, who could encourage a reasonable hope of even turning over this cumbrous pile, much less of getting a glance at its contents. But this, however, is a modern bugbear,—one of the fruits of our steam-press reformation ! It was said sneeringly, at the commencement of the seventeenth century, that all the common law books in England might be carried in a wheelborrow ; and Sir Edward Coke enumerates thirty-six volumes, which constituted, in his time, a complete law library, viz : the Year Books, Keelway, Plowden, Dyer, Coke, (his Reports,) Bracton, Fleta, Mirrour, Lyttleton, Perkins, Finch, Fitzherbert, Doctor and Student, West's Symboleography, and Crompton. In Sir Matthew Hale's time, we find the chief justice expending upon his library £1,500 a year ; still later, Mr. Hargrave's sold for £8,000 sterling ; and, at the present day, the lawyer must

look out his million of law points, one can scarcely tell where. According to Chancellor Kent, the English Reports now make up 364 volumes, text books and digests 284 volumes, in all 648 volumes; besides the statute law, which Paley says is included in 50 volumes folio—to which add 200 volumes American Reports, Treatises, etc.! M. Camus, according to the same writer, drew up a select list for a lawyer's library, which contained 2,000 volumes, mostly ponderous folios, excluding entirely the English common and statute law! Truly do we live in an age of books, and what heavy draughts do their purchase make upon the profits of the profession. Not only are they formidable as to number but costliness, while, to make the matter as bad as can be, every few months produces a new edition. Apropos to the profits of the profession: we hear but seldom in our days of the princely fortunes realized and the enormous revenues. Sir Edward Coke enumerates two hundred noble families who had risen by the law, down to his time. Sir Samuel Romily's practice was £15,000 a year; Lord Keeper Dudley's £7,000; Lord Coke's £12 or 14,000; Sir Charles Wetherel received 7,000 guineas as a fee. We have often heard of medical quackery riding through the world in princely magnificence,* but no quackery or charlatanism could keep a man's life together at the law—nothing but the highest skill and the most profound learning can hope for this consummation.

Some observations on the literary character of lawyers would not be inappropriate in this place. The opinion is as old as the hills, that to become a great lawyer one must be content to be nothing else than a lawyer—must circumscribe his vision and draw in his scattering fancies within the narrow-drawn limits of Westminster Hall, making it his cradle and his grave—his ultima thule—the ne plus ultra of his struggles. Hence, we have a lawyer regretting that “the sober habit of mind induced by the studies of the office and the closet should ever be invaded and its energies let loose to wander through the tempting regions of general literature, taste, politics and metaphysics.” The common law has been said to be a jealous mistress, withholding all favor from the inconstant. It is, to be sure, a hard requisition, that one, for any amount of distinction, should be compelled “to eat sawdust without butter” all his life, when so many inviting feasts are set out on every hand before him; but they that tell us he must, say that “saw-dust,” etc., is not very bad after all, when one becomes used to it. If a great lawyer can only be manufactured in this way, it were far better, according to our

* S. Q. Rev., VIII, Physic and Physicians.

notions, not to be a great lawyer at all ; genius, humanity, everything noble in our nature, forbids the idea of being sepulchered in one profession, however vast. "It is a sad account," says Adam Smith, speaking of the division of labor, "that he who has been employed all his life making pin-heads must carry to the Almighty." But, is all this a fact? Are the pursuits of law and letters so incompatible as they have been represented? Let us turn again to the annals of the profession. Cicero was a lawyer, and yet he exhausted all the fields of literature and philosophy ; but alas ! he was no poet—what Bœotian clouds enshrouded him, when he would scale Parnassus ! "Had he written nothing else but this line," says Juvenal,* "he had been forever safe from the swords of Antony's followers :"

O fortunatam natam me consule Romam ;

or, as Dryden has felicitously translated—

Fortune fortun'd the dying notes of Rome,
Till I, thy consul sole, consoled thy doom.

D'Aguesseau was a profound and elegant scholar. Somers was a classic of the highest character. Hale, a mathematician and theologian, and produced works upon both subjects. Lord Kames wrote the Elements of Criticism, a work destined to immortality. Sir William Jones was a poet and linguist, as we have already had occasion to show. More, Bacon, Selden, Mansfield, King, Eldon, Sugden, Lyndhurst, and Blackstone, did not disdain, at some period of their lives, to court the muse ; nor were they ever *mere* lawyers.

Where lawyers have been remarkably deficient in general knowledge, they have sometimes rendered themselves supremely ridiculous. Lord Kenyon's want of scholarship is well known ; he had a propensity for bad Latin, which his lordship would force in upon all occasions ; there was no end to his blunders. Having, at one time, enumerated several distinguished persons who had been advocates of Christianity, he concluded, "Above all, gentlemen, need I name to you the Emperor Julian, so celebrated for the exercise of every Christian virtue, that he was called Julian the Apostle." Mr. Chitty advises the lawyer to fill up his leisure hours with anatomy, physiology, pathology, surgery, chemistry, medical jurisprudence and police.

We have upon record for our improvement the plan of study pursued by many eminent lawyers—their hours of labour, amusement, etc. The Lord Guilford, for a considera-

* 10 Sat. 123, etc.

ble time, according to his brother, devoted himself sixteen hours a day to his books, repeating over and over the lesson, "keep your shop and your shop will keep you." Sir Matthew Hale studied sixteen hours; but Lord Mansfield thought the quantity of professional reading necessary much less than is supposed.

Every one will remember Coke's favorite verses :

Sex horas somno, totidem des legibus æquis
Quatuor orabis ; des epulisque duas,
Quod superest ultro sacris largire Camænis.

Which Sir William Jones translates :

Six hours to sleep, to law's grave study six,
Four spend in prayer, the rest on nature fix.

Or rather, he says :

Six hours to law, to soothing slumber seven,
Ten to the world allot, and all to heaven.

The lord keeper Williams slept but three hours in the twenty-four. Roger North considered four hours a day sufficient quantum of study, which Sir Eardley Wilmot enlarged to six. A certain eminent lawyer remarked that he once thought well of a young man, until he heard that he studied sixteen hours a day, when he never could think well of him afterwards. In his hours of amusement Guilford would play upon the bass viol, whilst his friend, the Duke of Lutterdale, used to say that he would rather hear a cat mew than the best music in the world, and the better the music the more sick it made him. Something similar to this is said of Burke, Fox, Dr. Johnson, and Pitt. Justice Yates amused himself with reading Dean Swift; Camden, with the old romances, particularly the "Seven Champions of Christendom." Sir Edward Coke played at bowls.

How much better all of these than the "occasional inebriations" in which the earlier poets would indulge themselves:

Fetch me Ben Johnson's skull, and fill't with sack,
Rich as the same he drank, when the whole pack
Of jolly sisters pledged, and did agree
It was no sin to be as drunk as he.

But, after all, the recreations of D'Aguesseau and Brougham are to be preferred; the one relaxed himself with an interchange of studies, "*Le changement de l'étude est mon seul débassement,*" in his own language—the other, after the fatigues of the chancery court, a cabinet council, and a debate in the house of lords, amuses himself by solving difficult problems, and speculating in the higher branches of physical science.

By the way, who would ever have dreamed of any relationship subsisting between law and poetry—yet such there is, and the evidences of it are not few. The Greek word *nómos* sig-

nifies a law or a poem—its explication being found in the fact, that in the earlier ages of Greece laws were thrown into verse, and sung by way of promulgation. Thus was it also with the laws of the Welsh and Britons.

Als free
Mak I thee
As heart may think
Or eigh may see :

was a form of legal manumission.

The following is a grant made by William I—

From me and from myne, to thee and to thyne,
While water runs and the sun doth shine ;
For lacke of Heyrs to the king againe,
I, William, King, the third of my reign,
Give to the Norman Hunter
To me that art both Line and Deare
The Hoppe and Hoptoune
And all the bounds both up and douno,
Under the earth to Hell, above the earth to Heaven.
To witness that this is sooth
I bite the white wax with my tooth
Before Jugg, Marode and Margery,
And my third son Henry,
For one bow and broad arrow
When I come to hunt upon Yarrow.

The description of the Lawless Court is amusing, which met at cock-crowing, "when they whisper and have no candle, nor any pen and ink—but a coal." Its title in the court rolls runs thus :

Curia de Domino Rege,	Clamat clam pro rege
Dicta sine lege	In curia sine lege,
Tenta est ibidem	Et nisi cito venerint
Per ejusdem consuetudinem,	Citius pœnituerint,
Aute ortus solis,	Et nisi clam accedant
Lucent nisi polus,	Curia non attendat,
Senescallus solus,	Qui venerit cum lumine
Nil scribit nisi colis,	Errat in regimine,
Toties voluerit,	Et dum sunt sine lumine,
Gallus ut cantaverit	Capiti sunt in crimine,
Per cujus soli sonitus,	Curia sine cura,
Curia est summonita :	Jurati de injuria.

What could possibly be more amusing than to see Coke's Reports done up nicely into verse ; yet some wag has thrown them into that form. The State Trials have also assumed a similar dress. The following case is versified from Burroughs' Reports :

A woman having a settlement
Married a man with none,
The question was—he being dead,
If that she had was gone ?
Quoth Sir John Pratt, her settlement
Suspended did remain,
Living the husband—but him dead,
It doth revive again.

Chorus of Puisne Judges—

Living the husband—but him dead,
It doth revive again.

This is equal to Lord Hardwicke's impromptu :

He that holdeth his lands in fee
Need neither to shake nor to shiver,
I humbly conceive—for look, do you see,
They are his and his heirs forever.

The remark has been made, in relation to the professions, that "physicians are the most learned, lawyers the most amusing, and then come the clergy." We can very readily answer for the eccentricity, good humor, wit and life, which have characterized the bar ; and, if it be not beneath the dignity of our article, shall narrate a few of its anecdotes.

Sergeant Hill was altogether an odd fellow ; abstraction was his forte. Arguing a point on one occasion, he drew out a plated candlestick from his bag, and gravely presented it to the court ; some one having, it seemed, substituted a traveller's bag in place of the sergeant's. At another time he appeared at court with some derangement of his dress ; the counsel near him observing it, whilst he was conducting one of his most profound arguments, whispered, "your breeches are unbuttoned." The learned sergeant, thinking it a hint connected with his cause, proceeded with all possible gravity, "my lords, the plaintiff's breeches were unbuttoned."

Lamb was complaining that the more he spoke in public the more diffident he grew ; as if it were strange, rejoined Erskine, that a lamb should grow sheepish. A strange humor possessed Erskine to witness fires, so that, according to Sheridan, a chimney could not smoke in the borough without his knowledge.

Mansfield was remarkably handsome. He was sitting to Sir Joshua Reynolds for a portrait, and being asked if he thought the likeness a good one, "Really, Sir Joshua, I cannot tell," said the old lord, "I have not seen my face in a looking glass for thirty years ; my servant dresses me."

But, perhaps, the happiest fellow for fun and frolic that the bar has ever produced was the celebrated Irish barrister, Curran. A volume might be occupied almost with his *bon mots* alone. He was ready for every occasion, and seemed to draw upon resources that were inexhaustible. "I can't tell you, Curran," observed an Irish nobleman, who had voted for the Union, "how frightful our old house of commons appears to me." "Ah ! my lord," replied the other, "it is only natural for murderers to be afraid of ghosts." A deceased judge had a defect in one of his limbs, from which,

when he walked, one foot described almost a circle round the other. Mr. Curran being asked how his lordship still contrived to walk so fast, answered: "Don't you see that one leg goes before like a tipstaff, and clears the way for the other." Cross-examining a horse-jockey's servant, Curran asked his master's age. "I never put my hand in his mouth to try," answered the witness. The laugh was against the counsel, till he retorted: "you did perfectly right, friend, for your master is said to be a *great bite*." A miniature painter, on his cross-examination by Mr. Curran, was made to confess that he had carried his improper freedoms with a particular lady so far as to attempt to put his arm round her waist. "Then sir," said the counsel, "I suppose you took that waist (*waste*) for a *common*."*

When counsel, Mr. Curran would frequently be interrupted by the judge, Lord Avonmore, with expressions of fretfulness and impatience: "I see the drift of it all"—"you are giving yourself unnecessary trouble, Mr. Curran," etc., etc. On one of these occasions the counsel proceeded, "Perhaps, my lord, I am straying, but you must impute it to the extreme agitation of my mind. I have just witnessed so dreadful a circumstance, that my imagination has not yet recovered from the shock." His lordship was now all attention: "On my way to court, my lord, as I passed by one of the markets, I observed a butcher proceeding to slaughter a calf. Just as his hand was raised, a lovely child approached him unperceived, and terrible to relate—I still see the life blood gushing out—the poor child's bosom was under his hand, when he plunged his knife into—into—" "Into the bosom of the child," cried out the judge, with much emotion. "Into the *neck of the calf*, my lord; but your lordship sometimes anticipates."†

Over the feelings of this good old judge, Mr. Curran had a perfect command. They had been companions in early life, and members of a patriotic and convivial brotherhood, entitled "Monks of the Order of St. Patrick." Political rancor had suspended this intercourse for a while, but Curran was the advocate in a cause, and Avonmore the judge: here was a field for the honest-hearted advocate, and recollections of happier days crowded in to soften down and subdue all unkindliness. As he reverted to the past, his feelings were too much for him—his bosom heaved with emotion—all that was tender prevailed. The presence of the judge called up a thousand associations. "From the dearest and tenderest recollections of my life," Mr. Curran warmly continued—"from the re-

* Life of Curran, p. 404.

† Life of Curran, p. 85.

membrance of those Attic nights and those refections of the gods, which we have spent with those admired, and respected, and beloved companions, who have gone before us, and over whose ashes the most precious tears of Ireland have been shed. [Here Lord Avonmore could not refrain from bursting into tears.] Yes, my lord, I see you do not forget them. I see their sacred forms passing in sad review before your memory. I see your pained and softened fancy, recalling those happy meetings, where the innocent enjoyment of social mirth became expanded into the nobler warmth of social virtue, and the horizon of the board became enlarged into the horizon of man—where the swelling heart conceived and communicated the pure and generous purpose—where my slenderer and younger taper imbibed its borrowed light from the more matured and redundant fountain of yours. Yes, my lord, we can remember those nights without any other regret than that they can never more return—

“We spent them not in joys or lust or wine,
But search of deep philosophy,
Wit, eloquence and poesy,
Arts which I loved, for these, my friend, were thine.”—*Cowley*.

The moment the court rose, his lordship sent for Mr. Curran and threw himself into his arms.

Let us conclude this long, but, we hope, not altogether uninteresting article, with an observation or two on the religious character of lawyers. Seldom has the world allotted an over-much of piety to any of this profession. If the world be right, it is a fact to be accounted for; perhaps there exists something in the atmosphere of courts unpropitious for the indulgence of religious feeling; it may be, but then we know that nothing is commoner than the same accusation against other professions. Medical men, for instance, have been charged with inclinations favorable to irreligion and infidelity. Anatomy has arrayed itself against revelation. We shall not pause to explain. We point the modern lawyer, and we point the world, to the pious Hale—the pure Romily! We would have infixd upon the minds of all mankind, indelibly stamped there, the dying words of Selden: “I have my study full of books and papers on most subjects in the world, yet I can recollect no passage wherein I can rest my soul, save out of the holy scriptures,” and the most remarkable passage that lay upon his heart was from 2 Titus 11–14. The consolatory language of the great Erskine is worthy of all acceptation: “My belief in the Christian religion arises from the fullest and most continued reflections of my riper years and understanding. It forms at this moment the great consolation of a life, which, as a shadow, passes away;

and without it, I should consider my long course of health and prosperity as the dust which the wind scatters, and rather as a snare than a blessing." Let the jurist be guided by these elevated truths—let him receive instructions from the Book which can never fail—let his path be illumined by

"this ray of sacred light—
This lamp from off the everlasting throne."

let him be pure in heart—be incorruptible in integrity—high in honor—giving "his days and nights, with a sincere and constant vigor, to the labors of the great masters of his own profession, and though he may now be but a humble worshipper at the entrance of the porch, he will entitle himself to the highest place in the ministrations at the altar, within the inner sanctuary of justice."

THE AIMS AND OBJECTS OF STATISTICAL INVESTIGATIONS.

THE STATISTICAL CONGRESS AT BRUSSELS, SEPTEMBER 19, 1853, PREPARED
FROM OTTO HUBNER'S JAHRBUCH, FOR 1855, AND AN ADDRESS OF MR. LEONE
LEVI, BY LOUIS SCHADE, OF WASHINGTON, D. C.

The readiness evinced of late by all governments to cooperate in the promotion of science and of subjects of general utility is one of the most prominent features of the age in which we live. The affinity of interests which binds all nations of the earth is better understood and appreciated; the study of natural laws, in their relation to society, is more expanded and intelligent; the institutions of all countries are closely scrutinized, and rather than be wedded to antiquated systems, each is eager to profit by the experience of the other. Statistics are the safest guides for the appreciation of institutions. They are the records, not of theories, but of results. They reveal all that is defective; they are the instruments by which the truth or fallacy of principles is unanswerably tested; and by them comparisons may be instituted. But there can be no comparison without a common point and a common channel. This is wanting in statistics. They are collected in all countries, but without unity of purpose they reveal no phenomena, and illustrate no universal law; without uniformity in the forms and language of statistical documents they afford no basis for comparison. To supply this desideratum was the object of the Statistical Congress. It aimed at realizing a new era in this cosmopolitan science; it has for its object to facilitate the means by which nations may be beneficial to one another; to clear the path by which the laws of population, of production, of mind, and of morals may be better ascertained, and to diminish the barriers which

yet intercept the social, commercial, and scientific intercourse of nations.

As we have given already a sketch of the proceedings of this memorable congress at its first session, we confine ourselves to a resumé of the resolutions adopted:

I. *Statistical organizations.*—The congress, according to a programme issued by the Central Statistical Commission of Belgium, first considered the question of statistical organizations, with a view to the adoption of some uniform basis in all countries, both in the modes of collecting statistics, and in the official publication of statistical documents. It is greatly to be desired that henceforth the statistics of countries may be compared. To realize this, some general basis must be adopted; we must settle on the nomenclature of things; we must, so to say, adopt a universal language for the purpose, and simplify the tables which are to be the basis of comparison. The best instrumentality for the accomplishment of such an object is the creation, in each State, of a *central statistical commission*, or an analogous institution formed of the heads of the administration with *the addition of some individuals eminent in statistical science*, the central commission communicating with branch commissions in the provinces for all that is local or provincial. The central statistical commissions of all countries might be in constant communication among themselves, exchange their publications, and also transmit to each other the schedules used for the collection of information, so that they may be classified and organized. In order also to furnish the easiest means for the transmission of such documents, it was recommended to establish in each country a centre, or a person especially dedicated to send and receive all communications and publications of a statistical character. The statistical accounts were recommended to be made as accessible as possible, especially in the most useful parts, by publishing, at reduced prices, the summary tables with explanatory texts.

The importance of such arrangements is patent. Great difficulty is at present experienced in obtaining information from foreign governments, through the want of knowing what is actually published in other States, and through whose medium it may be ascertained. Equally important is the suggestion of publishing the summaries of statistical documents at moderate prices, as their bulk is a complete barrier, not only to the purchase of them, but also to their being easily handled and studied, the practical information they contain being often buried in the amount of particulars, chiefly of local interest.

II. *Population.*—The law of population is the most important subject of statistics. To ascertain the various causes which affect the state of population—to appreciate the true relation of all the social elements—and to show how each individual contributes his quota to the solution of the great human phenomena, are the labors of consummate philosophy and of deep mathematical science, able to grasp at great truths, fix their principles and deduce their consequences. The wider the sphere of observation the more solid will be the laws which it discovers. The recurrence of facts under different climates and in different states of society, and the modifications which certain laws assume as elements are changed or modified, are sources of careful study to the statist who takes man as the centre of his observations. Yet this important study is now restricted to small divisions of the human family, owing to the want of uniformity and unity in the collecting of the census in different countries. In England, the United States, Sardinia, Norway, and the Netherlands, the census is collected decennially; in France every five years; in the German states triennially; in Belgium at variable periods. Besides, great variety exists in the items of information collected, and on the principles on which the censuses are based. The congress had the subject under careful consideration, and after considerable discussion it came to the following recommendations:

1. That the census of population should exhibit the number of individuals actually in the country at the date of enumeration; and, also, such particulars as may be required of those individuals who have legal domicile in the country, although absent from it.
2. The census to be taken not less frequently than every ten years, and in the month of December.
3. A special return for each family or household.
4. Specials agents, or enumerators, to be employed.
5. The returns to state name and surname, age, place of birth, spoken language, religion, condition, whether single, married, or widowed, profession or occupation, residence, whether temporary or permanent, child receiving education, houses by stories, and number of rooms occupied by each family, gardens in connexion with the house, existing sickness, number of blind, deaf and dumb, absentees, and number of persons residing in public or private establishments.

In addition to the above there ought to be an annual registry of population, exhibiting the births by sex, by age of both parents, legitimate and illegitimate, number of twins, stillborn, deaths, marriages and divorces, by months. The deaths by sex, by age, and by months, distinguishing among dead children, till three years of age, the legitimate from the illegitimate. The deaths by months, with the causes of death, and the profession of the deceased; marriages, with the age of the parties, their condition, profession, and number of children, distinguishing the legitimate and those

acknowledged as such. Considering the extreme importance of a uniform nomenclature of diseases equally applicable to all countries, the attention of learned men is to be called to the question for further consideration at some future congress.

III. *Territory. National Survey.*—The question of population is immediately connected with that of territory, and with the national survey. In Great Britain the survey has hardly been commenced, though in Ireland it is complete. The congress adopted the following general recommendations: That it is desirable that each country shall be surveyed and mapped in a uniform manner. The statistical portion of the national survey should include the survey of the boundaries of the communes and their sectional divisions, the triangulations, the detail survey of roads, fields, &c., and the map of the whole country to be laid down on the ordinary scale of $\frac{1}{25000}$ (about 26 $\frac{3}{4}$ inches to one mile.) The following modifications to be adopted under certain circumstances: For forests and mountains the scale of $\frac{1}{30000}$, (nearly 13 inches to the mile;) for villages and crowded districts $\frac{1}{12500}$, (say 50 inches to the mile;) for maps of large towns intended for sewerage and sanitary purposes, the scale of $\frac{1}{3000}$; general index maps to be on the scale either of $\frac{1}{100000}$ or $\frac{1}{200000}$, (that is about 6 inches and three inches respectively, to the mile,) for the purpose of bringing together under the eye a considerable surface of the country, when minute detail is not required. The reference or terrier exhibiting the names of the owners, the nature, cultivation, and area of each parcel. The valuation consists in recording the terms of leases and sales, as well as the prices current of produce for a period of fifteen years, in order to determine the value and rent of farms, and the average value of each kind of property. To fix by districts the types and value of each class of cultivation; to apply this classification to each parcel, and register the value in the reference book. The permanency of the survey, that is, the keeping it up to the actual state of things, being admitted as a principle, it is necessary to take means to do this so effectually as to avoid the very costly, if not very useful method of revision at distant periods. The means suggested for such a purpose are by noting in supplementary plans or maps the change of form or limits of each individual field; the change in the nature of the cultivation; the change of owners and the changes in the value of property, in exceptional case provided by law. The following rules for making the survey were recommended: That the triangulation be made according to a general map of the country, if there be one, and if not, that it be commenced by the great triangu-

lation, dividing and subdividing the triangles which it will produce into smaller triangles, to serve as the basis for the survey. That the valuation be undertaken immediately after the survey. That the valuation be made in such a manner that the same figures should represent, as nearly as possible, the same value in all the districts, and that the whole valuation should accurately represent the whole revenue of the real property of the country at the time the survey is made. That the survey may prove the fact of possession, and be accepted as evidence of title. No corrections to be made in the survey unless proved by authentic legal documents.

IV. *Emigration*.—Emigration has of late frustrated the natural course of the law of population, and produced a complete metamorphosis in the position of our working classes. The boundless wealth, closely connected with the blessings of free institutions, of the United States of America, and the wonderful discoveries of gold in California and Australia, have, in their turn, created such an avidity to emigrate, that the number of European emigrants, for some years past, has actually exceeded one million per year. Emigration is also the natural consequence of social disorganization, political convulsions, and religious excitement. Fanaticism and credulity send thousands to new and distant American settlements. Persecution drives, once more, Protestants and Jews out of Catholic countries, and *vice versa*, Catholics out of Protestant countries. These are the causes of important changes in the resources of countries, and they demand a deep and intelligent consideration; hence the statistics of emigration afford a wide field of instruction. It is, therefore, important that a systematic plan be adopted for the study of these social disturbances, and to this effect registers of emigration should be kept in each town.

The information required with regard to each emigrant is the name and surname, place and date of birth, sex, age, and condition; religion, profession, and approximate value of the resources or capital at his disposal; the day of departure; the name of the country where he goes to reside; the port of embarkation; the port of debarkation; the known or probable general causes of emigration. In the case of an entire family, composed of children and adults, under twenty-one years of age, with no personal property, it will be sufficient to state what amount of capital the father possessed for the maintenance of his family. The individuals who emigrate privately will be registered, with all the information which may be attained. By means of such

information, collected in all countries, general accounts will be made up annually, showing the causes of emigration, the number of workmen, and amount of capital they have taken with them from the mother country. A similar system may be carried out to verify the emigrations. Registries might be established at the ports of embarkation and debarkation, exhibiting first the ports of embarkation, the number of immigrants, men, women, and children; the country whence they come, the number, tonnage, and flag of the ships by which they came; the cost of the passage on an average for each destination. And for the ports of debarkation, the number of emigrants, men, women, and children; the country to which they belonged; the number, tonnage, and flag of the ship by which they came; the number of deaths during the voyage by sex, age, and profession, together with the causes of death; the number and sex of sick persons at their arrival; and the condition and probable resources of the emigrants.

V. *Agricultural Statistics*.—How far the yearly home produce yielded the necessary amount of food for the growing population of the European kingdoms, (and among them especially Great Britain,) has ever been a subject of anxious speculation, and the source of grievous losses. In the absence of any reliable account of the produce of the crops, the wildest statements circulate freely, and they find sufficient credence to affect the markets, the forerunners of misery and suffering among the masses. Year after year a cry is made for agricultural statistics, but in vain. The statistical congress bestowed on the subject of agricultural statistics that attention it demands, and had under consideration the time at which agricultural statistics ought to be taken; the periodicity of such statistics; the instrumentality to be used, and the information to be collected. As to the mode or instrumentality, the congress could only recommend to use agents faithful and intelligent, so that all the facts may be verified in the same place. What is the most convenient time for the collection of agricultural statistics cannot be laid down. Leaving it to the judgment of the different governments and statistical commissions, the congress could only suggest that the last quarter of the year would be preferable. Nevertheless, it may be objected that the statistics of cattle would be better to be taken in spring. As to the periodicity of such statistics, it should not be at greater intervals than ten years. It is also recommended to form two volumes, one giving the results of the year, and the other the average result of the period elapsed between that and the previous accounts. And

with respect to the items of information, they should comprise all the conditions, proceeds, and results of the agricultural industry of the country at a given time, and all the facts which may assist towards their proper appreciation in all their different aspects.

VI. *Industrial Statistics*.—Industry is a general term embracing all manner of pursuits. It comprises agriculture, mining, manufactures, commerce, and fisheries. Yet by a conventional application of the term, it is more properly used with respect to manufactures and mining. The statistical congress recommended the following principal subjects of information: The number of men, women, and children under sixteen years, employed in the factories, distinguishing the number of children engaged as apprentices, and the condition of apprenticeship; the wages, showing the number of workmen who receive average wages, and more or less than the average. It should be stated, also, whether the workmen receive board and lodging. The statistics of manufactures are divided into two great branches, viz: Textile industry, comprising manufactures of hemp, flax, wool, cotton, silks; and miscellaneous industry, including, for example, sugar refineries, ship-building, &c. For both branches the inquiries should relate to the number of establishments, the mechanical force employed, the number of workmen, and their wages. As to mining industry, the information to be collected should relate to combustibles, minerals, and metals, showing the mines at work, their situation, depth, extent of the bed and qualities, the mechanical instruments used for extraction, number of workmen, average wages, and quantities extracted. The establishments to be classified according to the kind of metal produced or manufactured, such as iron, copper, lead, zinc, &c.; and specifying the principal instruments used for the work, such as furnaces, forges, founderies, &c.

VII. *Commercial Statistics*.—Of all statistics the statistics of commerce are subjected to the closest analysis. The merchant governs by them his daily operations; the economist draws from them the great lessons derived from the distribution and interchange of produce and manufactures. Public finances and foreign exchanges, banking and credit, are all affected by their great totals; and yet there is no branch of statistical operations necessarily more loose and less to be relied upon. Commercial statistics are classified under four heads: General commerce, special commerce, transit, and bonding. They are, moreover, divided into imports and exports by land, rivers, and canals, and imports and exports

by sea. The imports and exports by sea should also distinguish those by national and foreign vessels. The tables ought to specify the countries whence the merchandises are imported, or to which they are exported; the total quantities of weight, measure or number, following as much as possible a common type for the designation of these quantities, and the basis of valuation. The value and quantities ought to be given in units and decimal fractions. There ought to be two columns, one giving the official permanent value, and the other the variable or real value. The value of articles of import ought to be given exclusive of custom and excise duties. The tables should contain also the tariff, and the total amount of duties received. The accounts should always refer to a period of twelve months, and the general or summary tables show, as much as possible, the corresponding figures for anterior periods.

VIII. *Navigation*.—The statistics of navigation are divided into two great branches, sailing and steam vessels; for each of which the accounts should state the number and tonnage of vessels entered and cleared, without distinction of the countries whence they arrive or to which they are going; the number and tonnage of vessels entered and cleared with such indications; the number of vessels entered and cleared according to flag. In all these tables, the general results should exhibit the double distinction of national and foreign vessels, and the number of ships laden and in ballast; and as the basis of valuation for the tonnage is not the same in all countries, it should be stated upon what basis it has been made. The statistics of the mercantile marine should also exhibit the number, kind, and tonnage of vessels belonging to each country, of vessels constructed, and vessels naturalised during the year; the number of vessels lost, sold abroad, or broken up; the number of seamen enrolled each year, distinguishing national and foreign seamen. The congress recommended that in the statistical tables of countries not possessing the metrical system, a column should be added indicating the metrical reductions of weight and measures; and also that the government shall not limit their endeavors to the collecting statistics of foreign trade, but that they should collect every account which may be conducive to a correct estimate of the home trade. The Central Statistical Commission of Belgium was also recommended to prepare, before the meeting of the next congress, a report of all the statistical tables of commerce published in the different countries, showing their dissimilarities, both in their forms and their contents.

IX. *Economical Budgets.*—In order to appreciate the bearings of a subject of statistics so novel and important, some preliminary observations are necessary. The question itself originated in London, during the great exhibition of 1851, when a number of statisticians from different countries met together, and it was mainly due to the energy of the late honorary secretary of the London Statistical Society, the learned Mr. Fletcher, that the subject assumed a tangible form. The object of the inquiry is to arrive at a clearer knowledge of the resources of the working classes. It is not an attempt to prescribe or circumscribe the expenditure of individuals, making budgets of families as the budgets of provinces, but simply to organize into a system all those desultory inquiries which are constantly made into the state of the working classes. It is not to be expected that a question of such a character can by any means be reduced into a definite form, or into an absolute certainty; but any advance made into the discovery of the great arcana of the human family, the great question of the means of subsistence of the masses, will be of great public benefit. The question was introduced to the congress in a most eloquent address by M. Vischers, (Belgium,) which concluded with the following observations :

“Ainsi, Messieurs, en généralisant l'étude de cette question dans différents pays, on pourra approfondir tout ce qui concerne les classes laborieuses ; mais en même temps on étudiera les effets des différences physiques du sol et du climat, ou de celles qui proviennent des institutions ; quels sont les effets de la grande propriété ou du morcellement des terres, du développement de l'état industriel ou commercial, ou des occupations purement agricoles. Nous verrons si avec confiance et comme les yeux fermés on peut accepter la croyance, que les classes inférieures, abandonnées à elles-mêmes, peuvent toujours suffire à leur besoins.

“En repoussant une intervention exagérée de l'action sociale dans ce qui concerne les intérêts des individus, nous verrons si l'on n'a pas trop laissé jusqu'ici dans l'oubli les classes ouvrières, surtout celles qui peuvent souffrir. Tandis que certaines écoles ont montré peut-être une indifférence trop grande à l'égard de ces classes, d'autres ont produit des systèmes dangereux. Il nous faut rechercher la vérité. A ceux que leur cœur ne porterait pas à s'occuper de ces questions je répondrais par leur intérêt. Cet examen est nécessaire, peut-être même urgent.”—
“Jam proximus ardet Ucalegon.”

The budgets of the working classes comprise three kinds of expenditure: 1st. Expenditure of a physical and material character; 2nd. Religious, moral, and intellectual; 3rd. Luxuries and vices. The first includes nourishment, such as bread, vegetables, meat, milk, butter, spices, tea, coffee, and beer; habitation, clothing, sleeping apartments, wood or coals, light, washing, means for the preservation of health, baths, repairs of houses, insurances, purchase of furniture, taxes, postages, expenses incident to their occupation or accruing from the keeping of a garden attached to the house. The second class includes church expenses, school for children,

apprenticeship, purchase of books, subscriptions for moral, charitable, and intellectual purposes, subscriptions to friendly societies, savings' banks. The third class includes expenses at the coffee houses and public houses, drinking, snuff, gambling, lotteries, ornaments of toilette, theatres, public festivals, loans, and pledges. With a view to compare the results of such information, it is suggested to prepare the budgets of three families, composed each of father, mother, and four children, of sixteen, twelve, six, and two years respectively, for each great division of the country, or for such portion as may be the object of the study, distinguishing agricultural laborers and other kinds of workmen. The budget will have reference to a family of poor laborers maintained partially at the public expense; a family of laborers not comfortably situated, yet not under public charity; and thirdly, a family of laborers comfortably off and quite independent. Such budgets should exhibit the incomes as well as expenditure. The incomes involve the wages of the head of the family, mother, and children, counting the average number of days they are at work, the number of holidays, and bad times in the year. The other sources of income will be those arising from a garden or parcel of land, rent of a house or of a field, produce of pasture, of a pig, a goat, &c., enjoyment of public property, pensions, funds, interests, miscellaneous produce, and eventual income.

As the central statistical commission of Belgium has drawn up a number of queries on the subject which have already been largely circulated throughout Belgium, it was recommended that other governments should institute similar inquiries on the plan suggested.

X. *Statistics of Indigence or Pauperism.*—The statistics of indigents, or those in a state of actual privation of the necessaries of life, not of those comparatively poor, should be collected by departments in country places, by household or families, and by individuals, (men, women, and children below sixteen years,) distinguishing those who are accidentally or temporarily assisted and those who are assisted continually and permanently. It should also be ascertained, as much as possible, the number of persons receiving assistance from private institutions, either exclusively or together with public charities; and a periodical division should be made of the documents, registers, lists, &c., on which the poor are enrolled, distinguishing the ages and sexes. The principal and essential causes of poverty should be ascertained, such as old age, sickness, infirmities, widowhood, loss, or abandoned by parents, numerous family, want of work, insufficiency of

wages, or other involuntary causes; or bad conduct, idleness, intemperance, dishonesty, or other voluntary causes. Information should be collected of the number and nature of charitable institutions of different kinds, exhibiting the number of poor persons whom they assist at a time, or the character, causes, and effects of pauperism, number of mendicants, vagabonds, and abandoned poor without any legal domicile; valuation of the public charities and of the help afforded to the poor, distinguishing those that are assisted in their own houses and those assisted in the establishments, or in-door and out-door relief; the number of provident institutions for the object of alleviating or preventing poverty.

XI. *Educational Statistics*.—Educational establishments are divided into four classes—1st. Those applied to elementary teaching, or infant schools, including Sunday schools, schools for the blind and deaf and dumb, charitable schools, orphan schools, &c.; 2d. Middle schools, including athenæums, (academies,) lyceums, industrial and commercial schools, schools of agriculture, of navigation, &c.; 3d. Superior schools, such as universities, schools of mines, engineering, &c.; 4th. Those applied to special branches of education or science, such as religion, schools of design, gymnasium, military, &c.

The statistics of education should include, for each class, the number and nature of establishments, showing the subject of instruction, the method, the language in which teaching is conveyed, the religious character, &c.; the number of masters, instructors, and professors; the administration and inspection; the accessory institutions intended to complete the courses of instruction, such as conferences, libraries, museums, examinations, &c.; the income and expenditure, specifying the amount of fees from students; the amount of State or of charitable endowment; and the expenses of management, and inspection, and teachers. Other subjects of information are also recommended, such as may show how education and instruction are combined in the various stages; the special provisions made for the education and instruction of children of the agricultural laborers, working classes in the cities, and the poorer classes, whose education and instruction is given gratuitously, and where it is obligatory on the part of the children to attend, what rewards are afforded or compulsory means used; distinguish in establishments and schools of the first class the general attendance in summer and winter; ascertain, as much as possible, the results of the various systems of education, and compare their value; give the examinations, degrees, and diplomas generally granted;

the state of education among young men in the military service and among prisoners, and also the number of signatures in marriages; and, lastly, indicate such circumstances as may, favorably or unfavorably, affect such results.

XII. *Criminal Statistics*.—Criminal statistics embrace principally the number of offences and of commitments, the nature of crimes, the means used for their prosecution and repression, and the penalties inflicted. The congress recommended to establish, as the basis of criminal statistics, the nomenclature of all the offences which come under cognizance of the general code or special laws of any country rather than general classifications. To add to the statistical tables detailed explanations of the criminal legislation of the country, principally upon the meaning attached by the penal law to the qualifications, differences, and degrees of culpability. To invite the jurists, and, above all, the criminalists of different countries, to draw up, according to the penal law of their respective countries, a table, as detailed as possible, of the crimes, offences, &c., with explanations of their nature, with a view to form the basis and prepare the elements for a more general classification, applicable to all countries.

The statistics of crime should exhibit the number of offences under cognizance of the law; number of offences which, owing to any cause, have not been prosecuted, and the number of those which were prosecuted; and of the persons committed, by sex and age, by years up to 21 years of age, and by ten years from 21 to 30 and upwards; number of persons discharged and condemned, with the same distinction, the penalties inflicted, by a nomenclature as minute as possible; number of capital punishments, detentions; transportations, fines, &c.; indicating especially the number of executions, the durations of the penalties, whether for perpetuity, for more than 10 years, 10 to 5, 5 to 3, 3 to 1 years, 1 year and under; that of transportations, and the amount of fines; number of individuals imprisoned for any cause whatever; duration of detentions; number of discharges with or without bail; duration of the trial; number of persons condemned, by sex and age, distinguishing those who have been submitted to another trial. To these general statements there should be added the origin, domicile, condition, profession, and extent of education of the criminal, the causes known or presumed of the crime, the attenuating circumstances; the trials by defaults, mode of procedure and judgment, indicating each phase of the trial, the appeals, and the exercise of grace and pardon.

XIII. *Proceedings of Congress*.—The statistical subjects

proposed for discussion being exhausted, the attention of the congress was directed to two important questions, eminently calculated to promote the social and commercial relations between different countries. The first was the adoption of a system of international postage; the second, the extension of international commercial law. The proposed national and international code of commercial law has lately received considerable impulse and a practical tendency. The congress passed a resolution expressing a hope, 1st, that the recent postal reforms of different countries would be introduced into the international postal relations; 2d, that the great differences now existing in the commercial legislation of different countries may be diminished and even removed altogether. Another important wish was expressed, that special and detailed statistics be obtained for all large cities. The Central Statistical Commission of Belgium were then intrusted to select a place and fix a time for the future meeting of the congress, making it known at least six months before the time. Lastly, on the motion of Lord Ebrington, a vote of thanks was passed by acclamation to the president, (Mr. Quetelet,) and after a delivery of a short address by the president the congress closed on Thursday, the 22d of September. Thus terminated these most important proceedings. The congress set four days; the sections sitting between 9 and 12, and the congress from 2 to 4 o'clock, each day. The Central Statistical Commission, the minister of the interior, M. Quetelet, and M. Ducpetiaux, were sumptuous in their liberalities and hospitalities towards those who attended the congress. The king, the Duke de Brabant, with several officers, honored the congress with their presence, and invited a great number of the members to a banquet at the palace. The clubs and other public institutions were opened to the members, and a statistical dinner, attended by all the members of the congress, contributed to render the whole a most social and brilliant entertainment. Thus the interests of statistical science were extensively promoted, whilst the representatives of twenty-six States, and many scientific men from all countries, were united for the common object of establishing the basis upon which the true economy of nations may be founded.

XIV. *The effect upon the United States.*—The important proceedings of such a congress, upon such numerous and comprehensive subjects, cannot fail to awaken the deep interest of our country, and especially of our legislature, as its results impose on all governments and statistical societies responsible duties. To give effect to the wise suggestions of

the first Statistical Congress, (and, also, of the second, which opened the 10th of September, this year, in Paris, but of which the writer possesses no dates yet,) in so far, at least, as it is practicable, in this country, in what is now most essential. According to the different forms of government the instrumentalities employed must vary. We are, in this case, in no small embarrassment. Ranking, as regards commerce, agriculture, and the various exploits of civilized life, among the first nations of the globe, we must confess that in the important element of statistics we have not obtained that position to which we are entitled, and which, under all circumstances, we ought to occupy. We cannot complain of a scarcity of statistical writers, among which there are some well known even across the ocean, but we must complain of a certain nonchalance and indifference with which our Congress has regarded this matter till now. With exception of Switzerland, all European countries have official *permanent* statistical bureaux, under the superintendence of the most renowned statist of the country, and not under the unskilled management of political aspirants. *We have no such bureau*, and, therefore, all the above resolutions can only have a *partial* effect and benefit upon us, as the United States are not yet prepared to keep step, in this important branch, with other European countries. If the next Congress would direct its attention to the establishing of a new *permanent* statistical bureau, every statistician will hail with delight the progress secured by so successful an event.

COAL ON THE LOWER OHIO.

Every portion of the Mississippi valley is deeply interested in the development of the extensive coal mines in its centre. *There is the power that will attract our rich metals and varied fibrous staples, and that will strengthen our independence and union, and enlarge our national wealth beyond our conceptions.*

We copy the following article from the *Louisville Price Current*, and ask the attention of our commercial friends in the cities of the southwest to the facts it contains. If they would retain their present business, to say nothing of its enlargement, they must lessen the cost of river freights by lessening the cost of fuel for their steamboats.

The coal trade of the lower Ohio is beginning to assume no inconsiderable importance. The "Illinois coal basin," where it is cut by the Ohio river, is in the very heart of the American granary. Its coal is of every variety of the cannel and semi-bituminous species; is overlaid by sandstones of superior quality, and rests on refractory clays, said to be equal to those of Stonebridge, England. Iron ore, indefinite

in quantity and excellent in kind, is almost in juxtaposition, while lead ore is not of unfrequent occurrence.

These coals are in strata that average, perhaps, four feet in thickness, and resting immediately on a thin bed of soft shale are easily mined. Generally, they are reached by "adit levels," and sometimes, as at Cannelton, are self-draining. The cost of mining and delivery at that point is stated to be three and a quarter cents per bushel, (or about eighty-five cents per ton,) the "royalty" is usually one cent, and the present price is six cents by wholesale, or to barges and flat-boats; seven cents delivered to steamers from "box boats." The Cannelton cotton mill is supplied at five cents a bushel, or \$1 40 per ton.

Below the falls of the Ohio, at Louisville, the first available section of the coal field is found back of Cloverport, Kentucky. This is the purest "jet" yet found in America, and perhaps, is superior to that worked in England. It is about eight miles from the Ohio; the stratum is from twelve to twenty-seven inches thick, and between layers of sand stone; cost of mining say \$1 25 per ton; price at the river bank \$5 per ton. The Breckenridge coal company have here a large tract of this coal, and are now prepared to furnish large quantities of it. Its cost and high price will preclude a home market to steamers; but its freedom from disintegration, its cleanliness and rapid combustion, fit it, in a remarkable degree, for shipment. It should command at least \$12 per ton in our eastern markets, and can be furnished at a cost of about \$10 per ton. For chamber and parlor use it is immeasurably superior to any other coal. A new and probably important market is opening for this coal as a material for making lubricating oil. This oil has been used in the Cannelton cotton mill, and proves equal to the best sperm oil. Its cost is estimated at less than fifty cents a gallon. A company is already erecting a large mill at Cloverport for the manufacture of this oil on a large scale. Twelve miles below Cloverport are the Cannelton and Hawesville mines, on opposite sides of the river. Here the "dip" of the strata is about fifty feet to the mile, and from the out-cross on the top of the bluffs to the water's level the available coal extends about five miles along the river. On the Cannelton side, the whole coal and most of the surface is owned by the American Cannel Coal Company, which was formed in 1836, by Seth Hunt, J. T. Hobart, and some other Bostonians. This company, after various reverses and the expenditure of a very large capital, has succeeded in laying the foundations of what may become one of the most important manufacturing cities

in the country. In six years Cannelton, from a small hamlet, has become a town of some 4,000 people. Its cotton mill of 11,000 spindles has no superior and few equals of its class, and shows earnings that must induce the erection of others at the same point. Its cost of manufacture (brown sheetings) is said to be less than the average cost in New England, while it is in close proximity to the cotton fields, and is in the centre of a great market; its pay rolls of the mill and mines now average from fifteen to twenty thousand dollars a month. This will be largely increased by the operations of a wealthy and influential company, who have recently leased a section of the mines. The present capacity of the mines here is about 11,000 bushels a day. The new company referred to will soon be able to double this quantity.

At Hawesville there are four coal companies who can deliver about 10,000 bushels a day. The coal on this side of the river is of the same quality as that at Cannelton; but, as its dip is from the river, the expense of drainage is something of an item now, and will be constantly increasing. From the healthiness of the position, and the settled character of the country, Hawesville, as well as Cannelton, may expect to be in an important manufacturing position. It will perhaps be seen that free soil will prove most attractive to a manufacturing population.

The next coal mine in order is one recently put in operation at Lewisport, fifteen miles below. The coal is found in the hills about two miles from the river. A first class railroad has been constructed, and the delivery of some 2,000 bushels a day can be made. There is some contrariety of opinion as to the character of this coal and the extent of its area.

Next comes the Bon Harbor mines, three miles below Owensboro, Kentucky. The coal stratum is five feet thick, but so sulphurous that it cannot readily be sold for steamboat use. It will, doubtless, be valuable at some future time for manufacturing purposes. In this neighborhood the soil is of remarkable fertility, and can easily support an immense manufacturing population. The coal alluded to is decidedly better, and can be delivered at a far less cost, than that of Staffordshire, England.

The Newburg mines, in Indiana, eight miles above Evansville, have been opened by the Messrs. Roberts, and by Messrs. Phelps & Chamberlin. Their present capacity is about 4,000 bushels a day. The coal stratum here is about four feet thick, and is found 80 feet below the high-water mark. Its character is fair, and it can be worked to con-

COAL ON THE LOWER OHIO.

siderable advantage, if free from "faults," and if fissures in the overlying strata do not occur. Without faults, slips, or dykes the English mines could be worked. Each forms a limited water basin, and this is susceptible of drainage. The Illinois coal basin has probably over thirty distinct coal strata; what dislocations occur in these is yet to be ascertained. We have as yet scarcely noticed those on the outlines of the field and above the water level.

The Bodiam mine, at Evansville, has recently been opened by Messrs. Kerstemare & Co. It shows a coal similar to and below the level of that of Newburg.

Between twenty and thirty miles back of Evansville, the canal cuts a thick bed of coal, from which that city will draw part of her supply of fuel.

At Henderson, Kentucky, several companies are engaged in developing, by shafts and borings, the coal strata below the water level. Among the results of these borings, it is shown that brine of considerable strength can be raised in this vicinity, and it is likely that the manufacture of salt will become an important branch of industry on the Ohio, between the Cannelton and Union mines. Several coal mines have been opened on the Green river, from 25 to 60 miles above its mouth, and in the immediate vicinity of rich deposits of iron ore. The coal and iron of this district are likely to be developed soon by the wealth and energy of Mr. Alexander, whose rich mines in Scotland may prove inferior to those in Kentucky.

The lower or western margin of the coal field is cut by the Ohio at the mouth of the Saline and Tradewater rivers. In this vicinity, the Curlew mines, on the Kentucky side, are the first in order. At these, large preparations have recently been made for future business. What their capacity is we are not advised. The next are the Mulford mines, that have been extensively and profitably worked for several years. The yield here has reached 10,000 bushels a day, and the price has been eight and nine cents per bushel. The Curlew and Mulford mines are connected with the Ohio by railroads from two to three miles in length. Below, and some four miles up the Tradewater, are the mines of Hon. John Bell. At these the coal stratum is probably identical with that at Cannelton and Hawesville. Messrs. S. L. Casey and others have commenced operations on and near the Tradewater, of the extent of which we are ignorant. The Tradewater district, filled as it is with coal, iron, and lead, will at some future day rival that of the Mersey and Ribble in manufacturing importance.

In Illinois, and nearly opposite to Mulford's, is the confluence of the Ohio with the Saline, a small and narrow stream which rises in Hamilton county, and is, during the winter floods, navigable for nearly thirty miles. The bluffs on the eastern side, which contain six or seven seams of worked coal, come within three miles of the Ohio, and about six miles from the mouth of the Saline. Here the Shawnee Coal Company have, during the last two years, opened galleries, sunk shafts, constructed two miles of railroad, put up saw mills, and laid the foundation of a city. The stockholders are chiefly citizens of New York, and have the ability of accomplishing large results. The basis and material of a great city are certainly there. Equivalent advantages at any point in Europe would have made, long ago, a city with a population larger than that of Manchester and Birmingham combined. How long it will take here to conquer the forests and malaria depends on the faith and perseverance of these non-resident owners. The coal is various in quality; that which has already been in market has certainly been inferior. The good coal is there, however; but present prices and facilities are, perhaps, too limited to bring it out; as the bar at the mouth of the Saline has proved a serious impediment to the delivery of coal on the Ohio, it will be necessary to construct a new railroad from the mines to some good river landing. The width of the Ohio, and the changing character of its channel, as well as the crumbling nature of its banks from Shawneetown to the highlands below the Saline and Tradewater, are serious obstacles to the convenient delivery of coal on either side of the river in this district, while there may be no site for a manufacturing city nearer the mine than Wallace's Ferry, about fifteen miles below.

The Union coal mines are the lowest on the river. The thickness of the coal stratum there is said not to exceed twenty-seven inches. This can be worked at a higher cost, (say, four cents per bushel,) and will pay even at this. The extent of the seam is uncertain. Its quality is good. These mines are in the highlands nearest the confluence of the Ohio and Cumberland.

The Illinois Central Railroad cuts the lower or southern out-cross of the Illinois coal field about seventy-five miles from Cairo, and great reliance has been made on coal freight by the engineers of that road. At a low cost of transit (say two cents a ton a mile, or \$1 50 for the seventy-five miles) the coal from this source, delivered on barges at Cairo, would cost at least nine or ten cents the bushel, while an equivalent

article can be furnished from the mines on the river at seven or eight cents per bushel.

• The owners and lessees of the Lower Ohio coal mines have invested from one and a half to two millions of dollars in lands, fixtures, and rolling stock. They can now deliver about 50,000 bushels a day. Reckoning two hundred working days to the business season, this would yield a supply of only ten millions of bushels a year, or only one-third of the home consumption, and about one-fourth of the coal delivered in the vicinity of Pittsburg. The demand for coal between Louisville and the Balize is variously estimated. Some who profess to have examined the markets with care have stated it as high as thirty-five millions of bushels a year. They assume, however, that coal would be the exclusive fuel of steamboats, and in sugar mills, if it was supplied at moderate prices and with regularity. This assumption would seem to be allowed from the relative prices at which wood and coal could be furnished. From the following estimate, carefully prepared by the Coal Association of the Lower Ohio, it appears that coal, of which ten bushels are equal to a cord of cotton-wood, can be delivered on the Lower Mississippi at thirteen cents a bushel, and yield a fair profit. This equals cotton-wood at \$1 30 a cord, or less than half its average price. Probably it would be more economical for the sugar-planters to purchase coal at twenty-five cents a bushel rather than cut wood on their own lands, unless they were opening new lands for cultivation.*

* *The Cost and Profit of Towing Coal to the Markets on the Lower Mississippi.*—We publish to-day the estimates of the Association of Coal Owners and Lessees on the Lower Ohio, in reference to the cost of supplying the demand for our great staple in the markets from Cairo to New Orleans.

It is perfectly evident that the business of the river cities, from Louisville to New Orleans inclusive, depends to a great extent on the cheapness at which their steamers can carry freight. The only item of expense in running these boats that can be reduced in price is fuel—the substitution of coal for wood—and the placing of the coal at convenient depots at the lowest cost.

Fifteen dollars a cord for pine wood has been paid at New Orleans by Louisville boats within the past two years. Five and six dollars a cord for inferior cotton wood has been no unusual price on the Mississippi river during the same time.

Now, it is a fact beyond dispute, that ten bushels of our coals make more steam (in boilers properly arranged, and the coal burned in a proper manner) than can be made from a cord of cotton wood. It is evident from the estimate that these coals can be put at the depots from Cairo to New Orleans at an average cost of ten and a quarter cents per bushel, and, adding cost of selling and profits to those engaged in transporting and vending, the coals can be supplied at an average price of sixteen cents per bushel, or forty cents per barrel, thus lessening the cost of steamboat fuel one-half, (reckoning wood from Cairo to New Orleans at \$3 50 per cord,) and enabling the owners of these boats to compete with railroad freights.

We invite the attention of boat-builders, officers, and capitalists to the prospective importance and profit that must attend this branch of industry.

This is certain that the demand for coal will increase more rapidly than the supply. In 1845 the sales at the Cannelton

At a regular meeting of the Lower Ohio Coal Association, held at Cannelton, Indiana, on the 6th of November, 1854, it was

Resolved, That in a careful examination of the facts, gathered by the members of this association, as to the cost of towing coal in the lower Ohio and Mississippi rivers, the following estimate is believed to be substantially correct. Wherever a doubt has arisen, the highest estimate has been adopted. And in order to induce parties of skill and capital to engage in this business, this association agrees to furnish any responsible party, who will put into operation a tug and barges of the capacity stated in the estimate, coal at Cannelton, Hawesville, and Newburg, at seven cents per bushel; and at the Saline, Tradewater, and Caseyville mines at eight cents per bushel, receiving therefor satisfactory acceptances at four months, payable in New Orleans with interest and exchange added. And in case contracts cannot be made with individuals or companies, to furnish the supply on these terms, the members of the association will furnish the quantity proportionate to the capacity of each.

Cost of transporting one bushel of coal per mile, \$0,004—4-1,000 of a cent.

Cost of transporting one bushel to Cairo from Cannelton, 275 miles, one cent and one mill.

Cost of towing coal barges on Lower Ohio and Mississippi rivers, by a steam tug of 600 tons, 6 boilers, 25-inch cylinder, 10 feet stroke, drawing (light) 4½ feet.

FIXED CAPITAL.			
Cost of boat.....	\$30,000.		
Cost of twenty-four barges, \$1,500 each.....	36,000		
Total.....	66,000.		
INTEREST AND EXPENSES.			
Interest on capital, at 6 per cent.....	\$3,960		
Wear and tear 20 per cent., insurance on boat and barges, at 9 per cent.....	18,440		
Cost of running per month—			
Captain, at.....	\$100		
Two pilots.....	400		
Four engineers.....	275		
One mate.....	75		
Twelve men, at \$30.....	360		
Cook and boy.....	50		
Provisions.....	159		
Oil.....	51		
	1,470		
\$1,470 per month, for 8 months.....	11,760		
600 bushels coal per day for 240 days, 144,000 bushels, at 7 cts.....	10,080		
12 trips, 88,000 bushels each, 1,056,000 bushels, at 7 cents....	73,920		
Insurance on \$73,920, at 10 per cent.....	7,392		
Contingencies.....	1,000		
Total cost of coal in New Orleans.....	126,552		
1,056,000 bushels, at 16 cents, or 40 cents per barrel.....	148,960		
	126,552		
Nett profit.....	42,408		
C. O. CHAMBERLAIN, <i>Secretary.</i>			
1,056,000 bushels, at 60 cents per barrel...	\$253,440,	\$126,552,	\$126,888
Do.....do.....at 50.....do.....	211,200,	126,552,	84,640
Do.....do.....at 40.....do.....	163,960,	126,552,	42,408
Do.....do.....at 30.....do.....	126,720,	126,552,	168

At 31½ cents per barrel, a nett profit of 10 per cent. on fixed capital of \$66,000 would be made.—*Cannelton Reporter.*

and Hawesville mines amounted to only 213,000 bushels. Now, this quantity and more is required every month when the river is navigable. Then but few of the steamboats took on, at any one time, over three or four hundred bushels; now the same boats would take as many thousand. The change of opinion on this subject, and the difficulties experienced by the early coal dealers on the river, may be understood from the fact that until the last two years that skillful and thrifty boatman, Captain Sturgeon, could not be induced to use coal except in his cabin. Now the Eclipse often leaves the Ohio with 10,000 bushels upon her decks, even to the displacement of freight.

But the steamboat and sugar mill demand for the fuel of the lower Ohio will soon be inconsiderable when compared with its demand for manufacturing purposes. In a few years the men of energy and capital in the west will wonder at their own blindness in not appreciating and profitably developing the immense natural advantages afforded by the minerals, the fuels, the subsistence, and by the easy transit on the lower Ohio for the manufacture of their own great staples. They will then understand the perspicacity of that veteran manufacturer and statesman, Richard Cobden, of England, who years ago declared that the chief seat of the cotton manufacture must eventually be on the coal fields of the central west, where heat, power, iron, subsistence, transit, and material could be brought together and combined cheaper than anywhere else in the known world.

PROGRESS OF THE PRINCIPAL CHURCHES IN THE UNITED STATES.

At the recent conference of the Evangelical Alliance in Paris, Dr. Baird, author of "Religion in America," submitted a report upon the State and Prospects of Religion in America, in which was the following sketch of the progress of the Protestant churches in the United States, which we copy from the New York Commercial Advertiser:

We will consider the principal churches in America in the order in which they appeared there.

1. THE PROTESTANT EPISCOPAL CHURCH.—The Protestant Episcopal church is the oldest in the United States. For a long time it was the established and dominant church in most of the southern colonies, and in that of New York, and greatly suffered from its connexion with the State. Its progress since its emancipation from that connexion has been steady and even rapid. In the year 1800, it is believed, there were 320 churches, 16,000 communicants, 260 ministers, and

7 bishops. In 1820 there were 9 bishops, and about 500 ministers, and probably 30,000 communicants. There are now 33 dioceses, 38 bishops, 1,714 clergy, and 105,350 communicants. Of the bishops two, at present, are not in service, and three were appointed bishops for missionary fields abroad, one of whom is in western Africa, and one in China. In the Sabbath schools connected with the Episcopal church there were, in the year 1854, 69,000 pupils; the contributions of the church were, the same year, 398,650 dollars.

2. THE CONGREGATIONAL DENOMINATION.—This church, if we may employ the word in this sense in reference to a body which, like the Baptists, is not united by any general organization, was the second that appeared in this country. It has steadily advanced in numbers and influence from the first. It has 2,449 churches, 1,848 pastors, 479 ministers without charge, (such as professors, teachers, &c.,) and 207,608 members. The Congregational body was long the dominant denomination in New England, and was scarcely found beyond the limits of that part of the country. It now exists, however, in the States of New York, Ohio, Michigan, Illinois, Wisconsin, Iowa, and California. It has increased steadily and even rapidly, but not so rapidly as it would have done if so many of those who have emigrated from New England had not fallen into the Presbyterian and other churches, chiefly, until lately, because they could not find that of their education and preference elsewhere. No churches in the United States, it is believed, give more money, according to their means, than the Congregational for the advancement of the kingdom of God at home and abroad.

3. THE BAPTIST CHURCHES.—No denomination of evangelical Christians encountered so much opposition, both in the north and in the south, at the hands of the established churches in those portions of the country, in the colonial era, as the Baptists; and certainly not more than one church has had greater success during the last fifty years. A few figures will prove this. In 1707 there were but 17 Baptist churches in the United States; in 1740 there were 37; in 1762 there were 56; in 1792 there were 1,105 churches, 891 ministers, and 65,345 members; in 1812 there were 2,433 churches and 1,922 ministers; in 1854 there were of "Regular" or "Associated" Baptists 500 associations, 10,131 churches, 6,175 ordained ministers, and 808,754 members. If we include, as we ought, the anti-mission (hyper-Calvinists) "Free Will Baptists," "General Baptists," "Seventh Day Baptists," (71 churches, 77 ministers, and about 6,500 members,) Tunkers, and "Disciples of Christ," (often called "Campbell-

ites,") we must add at least 5,000 churches, 2,350 ministers, and 270,000 members, making the total of Baptists in the United States to be: 15,131 churches, 8,525 ministers, and 1,078,754 members.

4. THE PRESBYTERIAN CHURCHES.—In the year 1705 a presbytery, consisting of seven ministers from the north of Ireland and from New England, was formed. From this body arose the large body of churches which bear the distinctive appellation of Presbyterian. In 1800, it is believed, there were about 300 ministers, 500 churches, and 40,000 communicants or members. In 1832 there were 1,935 ministers and licentiates. In 1843 the two branches (for this church was divided into two bodies in 1838, called Old and New School) had 2,991 ministers and licentiates. In 1854–55 the statistics of these two bodies combined were as follows: 2 general assemblies, 52 synods, 254 presbyteries, 3,770 ministers, 346 licentiates, 648 candidates, 4,635 churches, 368,433 members; contributions to congregational, missionary, educational, and other religious objects, at least 4,000,000 dollars,* and 10 theological seminaries.

We subjoin, in a tabular form, the statistics of the other branches of the Presbyterian family or group of churches:

	Gen. Assem.	Synods.	Presbyteries.	Ministers.	Licentiates.	Candidates.	Churches.	Members.
Associate Church.....	1	20	164	21	32	267	21,588	
Associate Reformed.....	5	34	315	30	60	375	30,000	
Reformed Presbyterian.....	2	13	108	15	22	160	14,000	
Cumberland Presbyterian.....	1	15	48	800	400	80	1,000	
German Reformed.....	2	23	350	25	40	1,000	110,000	
Reformed Dutch.....	1	2	28	332	15	35	36,297	

Combining these six Presbyterian denominations or communions with the two great branches just spoken of, we have a total of 4 general assemblies or general synods, 79 synods, 417 presbyteries and classes, 5,889 ordained ministers, 822 licentiates, 915 candidates, 7,759 congregations, and 680,021 members or communicants. This Presbyterian family, or group of churches, has, in all, 19 theological schools under their control, and 30 colleges, with more than 5,000 students in them. In the year 1800, there were not more than 450 ministers, 7,000 congregations, and 60,000 members, in the United States. The three Scottish bodies,

* The statistics are partly those of May, 1854, and partly those of 1855.

the Associate, Associate Reformed, and Reformed Presbyterian,) now numbering 587 ministers, 802 churches, and 65,588* members, scarcely existed at that time. The Cumberland Presbyterian Church did not exist till 1810. The increase of the German Reformed Church has been great within the last forty years.

5. THE METHODIST CHURCHES.—This is the youngest of all the larger sisterhoods of churches in the United States, and is by far the most numerous. The first Methodist church in America was organized on Christmas Day, 1784, nearly seventy-one years ago. The progress of this branch of the evangelical body has been unparalleled. I am indebted to a minister in that body, (Rev. Mr. Butler,) every way competent to the task, for a very complete report, made up to the latest possible date, say the first of January, 1855. Of this report I can only give a resume.

As in the case of the Presbyterian body, the Methodist Church in the United States has several branches. There are the great branches called the "Methodist Episcopal Church" in the north, and the "Methodist Episcopal Church South." We subjoin a tabular view of the whole:

	Bishops.	Elders.	Effective ministers.	Membership.	Missions.	
					Home.	For'n.
Meth. Epis. Church.....	7	235	4,579	783,358	823	47
Meth. Epis. Ch. South..	7	131	1,672	579,525	271	34
Unit. Breth. in Christ...	4	.....	250	67,000	.....	.....
Evangelical Association..	2	.....	195	21,076	.....	.....
African Meth. Epis. Ch..	3	.....	300	21,237	.....	.....
Afr. M. E. Zion Ch.....	2	.....	155	6,203	.....	.....
Meth. Protestant Ch.....	.....	.....	916	70,015	103	.....
Wesley Meth. Connex'n..	.....	.....	310	23,000	.....	.....
Prim. Meth. Ch.....	.....	.....	12	1,100	.....	.....
	25	464	8,389	1,672,517	1,197	81

We add a few other statistics: These several branches of the Methodist family of churches have 132 annual conferences, 12,618 "local ministers," who preach more or less every week, 811 "superannuated ministers," many of whom preach a great deal; (making a total of 22,198 ministers of all classes,) 1,255,897 members of Anglo-Saxon origin, 209,580 of African origin, 100,562 Germans, 1,024 Swedes and Norwegians, 515 Welsh; 4,929 Indians; 13,146 Sabbath

* This figure is too low. The Associate Reformed Church must now have east 35,000 members instead of 30,000.

schools, 129,885 teachers in such schools, 691,700 scholars, and 1,959,628 volumes in Sunday school libraries; 17,949 conversions in 1854; 138,093 members of the mission churches in the home field; 56 missions, 30 "local preachers," 6,869 members, 83 day and Sunday schools, with 3,469 pupils, in the foreign field; amount expended in missions since 1819, 3,408,998 dollars.

There belong to the Methodist family of churches in the United States, 13,280 church edifices, with 4,342,579 sittings, valued at 14,822,870 dollars; amount of stock in "book concern," 696,325 dollars; and annual sale (in 1854,) 199,687 dollars; 10 quarterly and monthly periodicals, with a subscription list of 225,000; 24 religious newspapers, with a weekly circulation of 127,900; 24 colleges, with 99 professors, 1,779 students, 61,270 volumes in their libraries; property in funds, 1,327,111 dollars, and income of 43,824 dollars; 133 female seminaries and colleges, 11,678 pupils; 505,129 dollars vested in their behalf; amount given in 1854 to the Bible, tract, missionary, Sunday school societies, and for the support of superannuated ministers, 734,618 dollars.

Mr. Butler states that the amount invested by the Methodist churches in their "book concerns," colleges and seminaries, churches, &c., is 17,411,440 dollars; and he estimates the amount given in 1854, to the support of the ministers, religious societies, Sunday schools, &c., including income from the college and other vested funds, (but not including what was given in ordinary charities, building churches, &c.,) at 7,536,916 dollars; which, deducting the colored membership in the "Methodist Church South," is, on an average, more than five dollars per month.

He estimates the proportion of the population of the country which may be said to be under the spiritual care of "American Methodism," at 6,475,902.

6. OTHER CHURCHES.—THE LUTHERAN CHURCH.—This church is rapidly increasing among us, partly from conversion, partly from immigration. In 1841, the number of ministers was 406, congregations 1,200, communicants 104,000, under the control of one general synod, and 14 district synods. We have been unable to get hold of the statistics of this church for 1854; but, according to the best informed ministers of the body, whom I have within a few weeks consulted, I think the following general statement within the limits of exact truth: 1 general synod, 23 district synods, 980 ministers, 2,000 congregations, 190,000 communicants, 8 theological schools, 6 colleges, 10 or 12 male and female academies, a deaconess institute, (at Pittsburg,) an education society, a foreign mis-

missionary society, a home missionary society, a church extension society, 12 religious newspapers and other periodicals, 6 of which are in English, 5 in German, and 1 in Norwegian. The Foreign Missionary Society for several years aided Rev. Dr. Rhenius and the Palamcotta mission in India. It now has five ordained missionaries and their ladies in that country, 5 young men (natives) preparing for the work, 7 small congregations, 86 communicants, 24 schools, and 355 pupils. Its receipts the last two years were 11,797 dollars. The Home Missionary Society employs some 30 or 40 missionaries in the home field.

MORAVIANS, OR UNITED BRETHREN.—This is but a small body with us, having several communities, chiefly in Pennsylvania. They have 1 bishop, 23 churches, 28 ministers, and about 5,000 communicants. This body is distinguished for its morality, industry, and zeal, in the cause of missions.

MENONISTS.—This quiet and inoffensive body is estimated to embrace 400 churches, 250 ministers, and 30,000 members. Their congregations are small. Their assemblies are more frequently held in private houses than elsewhere. Their influence is very inconsiderable. They perform baptism by pouring water on the subject, and not by immersion or sprinkling.

WINEBRENNERIANS.—This is a small branch of German Christians, chiefly in the State of Pennsylvania, that take their name from a Mr. Winebrenner of that State, who is a most zealous and worthy man. They have 6 elders, 130 preachers, 168 churches, 415 preaching stations, and 17,500 members. The people, we ought to say, call their body The Church of God—not Winebrennerians.

THE ORTHODOX FRIENDS.—We know not the number of their “meetings,” or of their “meeting-houses,” or places of worship. The census of 1850 states that their places of worship were valued at \$1,713,757, and their church accommodation at \$287,073. From this we gather that there must be some six or seven hundred congregations. It would be right, perhaps, to say that of these 300 are orthodox, that is, hold to the inspiration of the scriptures, the divinity of the Son and of the Holy Spirit, and salvation only through the merits of Jesus Christ.

NUMBER OF EVANGELICAL MINISTERS AND MEMBERS.—From these statistics it would appear that, in 1854, there were in the United States, 27,740 ordained ministers of the gospel belonging to the several evangelical branches of the one true church of Christ. The number of the members or communi-

cants in such branches was 3,986,750. If we suppose the population of the United States to be at present 26,500,000, then there is one minister, on an average, for a fraction more than 937 inhabitants. And this leaves out of view the Evangelical Friends, whose statistics we do not possess, and also the ministrations of the "local ministers," who, as we have seen, exceed 12,000 in the Methodist body alone. This statement is more favorable than that which we quoted from the organ of the Presbyterian church. We have no doubt that the statistics of all the evangelical churches in the United States would show at this time a membership of four millions! Nor can the number of those who preach "Christ crucified" with a good degree of faithfulness and clearness, ministers having pastoral charges, professors in colleges and seminaries, licentiates, local preachers, &c., be at all less than 40,000.

THE NON-EVANGELICAL BODIES.—We have hitherto spoken only of those who, in their symbols of doctrine and in their preaching, hold, according to the reformers and the apostles, the "faith that saves." But we should not give a correct view of the country, nor do justice to the voluntary or self-sustaining principle of religion with us, if we did not take proper notice of those who are not deemed evangelical in their doctrines and practice.

1. **THE UNITARIANS.**—This body is nearly confined to New England, and even there exists mainly in Massachusetts. They number about 260 congregations, as many ministers, and 35,000 members. Their increase does not correspond to that of the population of the country; or that of any of the large evangelical bodies. There are two parties among them; the more serious constitute one, and Theodore Parker, Ralph Waldo Emerson, and others of the "natural" school, who are Rationalists—Deists in other words—are at the head of the other. They have two theological schools, one at Cambridge, (near Boston,) the other at Meadville, in Pennsylvania.

2. **SWEDENBORGIANS.**—Of whom there may be 45 churches, 32 or 33 ministers, and 3,000 members.

3. **CHRISTIANS.**—Who are reckoned to have about 600 congregations, (generally small,) 500 preachers, and 30,000 or 35,000 members.

4. **UNIVERSALISTS.**—According to the most recent statement which they have published, there are of this body 828 churches, and 640 ministers. The number of the members of their churches was not given. It may be 50,000, although

we doubt it. There is, on the part of some of this body, as well as of the Unitarians, a growing sense of their need of more spiritual life.

5. **ROMAN CATHOLICS.**—At the commencement of this year, (1855), there were 7 archbishops, 33 bishops, 1,704 priests, 1,824 churches, 21 incorporated and 5 unincorporated colleges, (having 2,612^{*} students,) 31 theological seminaries, (attached to as many dioceses and directed by the bishops,) with 500 students, and 117 female academies. As to communicants, or members of this body, we can say nothing definite. Archbishop Hughes of New York, when he says that there are three millions and a half of Roman Catholics in the United States, simply means to include all who attend the Roman Catholic Church, or have received the rite of baptism at the hands of the priest—men, women, and children. We are inclined to think there are not more than three millions, or at most three millions and a quarter of Romanists in the United States. The number of “communicants” can hardly exceed 12 or 14 hundred thousand.

6. **JEWS.**—The number of Jews is increasing in America. Their synagogues were estimated, in 1850, to hold 19,588 persons, and valued at \$415,600. We should suppose that the number of their synagogues may be 60 or 65.

SUMMARY OF THE NON-EVANGELICAL BODIES.—It will appear from what we have just said that the number of ministers in the non-evangelical bodies, great and small, is 2,486; of the congregations, 3,607; and that of the members, about 700,000.

COMMERCE OF THE OHIO AND MISSISSIPPI.

THE JUNCTION OF THE OHIO AND THE MISSISSIPPI, AND ITS RELATIONS CONSIDERED.—No American geographer can look on the map of his country without astonishment, nor trace its expanding outlines without admiration. Before the old States have authoritatively marked out their boundaries; before, with a single exception, they have delineated their topography or triangulated their areas, except for bases, along the Atlantic coast, new States, of vast extent and territory, with boundaries reaching beyond actual settlements for thousands of miles, rise up in the distance with a celerity that outstrips calculation. New centres of trade and commerce are discovered; new plains of exhaustless fertility are thrown open to the labor of man; new rivers are explored without rocks or rapids or waterfalls to interrupt their navigation;

and new mines are opened of metals and of coal, so rich, so measureless in their contents, that they may be considered as the store-houses established by Providence to meet the necessities of civilization among the future throngs who are destined to live beneath our western skies.

And, added to this, we find new climates, adapted to every variety of healthful vegetation, and that serenity of temperature which makes existence a blessing, and gives to social life its best forms, its highest powers, and to our political compact the largest constitutional freedom, and its most energetic and grateful defenders.

In this aspect it is in which physical geography delights to contemplate the condition and advancement of the great west, and by which it learns to value and properly to estimate its great destinies, and more than this, to discover by natural laws, by the structure and direction of mountain ranges, the source and course of rivers, to which even the most skillful engineering must give attention, where the coming generations of our countrymen must fix their habitations, and where emigration may best direct its footsteps now.

Not a hundred years ago (and what a contrast does this fact exhibit) the American colonists were better known in Europe by the name of "Bostonians" than any other; for the intercourse of the city of Boston with the mother country was more distinct and regular than at any other point, making it, in fact, the centre of the British trade.

The city of New York was, for a long time, rather the port of a private Dutch commercial company, and her commerce was under licences, and a closed one to the world at large. Newport, in Rhode Island, between the two, was, for a long time, though at a later period, a point of extreme interest in our then commercial world, and its fine harbor seemed formed to shelter the largest merchant fleets. It is a curious fact that at one time the French government entertained the serious design of purchasing Rhode Island as a naval station for its North American squadron! So, too, Philadelphia, at the close of the revolution, became the centre of a large trade, and suffered more from its vicissitudes than any other city in the United States. Matthew Carey, in an early edition of the Olive Branch, describes an almost entire cessation of business, and the sale of hundreds of houses for debts due foreigners, who, directly on the cessation of hostilities, threw large supplies of goods into Philadelphia to be sold at any price.

It is also a curious fact that this over-importation, a part

of which was actually hundreds of packages of second-hand clothes from Monmouth street, was attributed to the existence of free ports on the Delaware, and ports with light duties of about five per cent.; each State, until the adoption of the Constitution, having the right to adjust its own tariff.

When cotton and rice were cultivated as staples at the south, Charleston and Savannah became cities of more than their former importance; and when Louisiana was purchased from France, New Orleans rose into consequence as the seaport of the Mississippi; and, finally, on the successful introduction of steam upon its waters, became, beyond all comparison, the greatest southern commercial city of the Union. Here have continued to be received the vast products of the west for distribution around the Gulf, among the Antilles, and exported to every commercial port in Europe. Then, upon this development, others followed; and with the formation and growth of the States of Ohio, Missouri, and Illinois new local centres began to be discovered. St. Louis, Cincinnati, and Chicago, emerged from the nebulae of population around them, orbs of commerce, with their own spheres and systems, all becoming brighter, larger, and denser by the laws of commerce, which are but another form of the laws of nature.

So astonishing and so rapid have been these developments, one would suppose that even American progress would sometimes pause to rest itself and to take breath before resuming its march. Not so. What has been done is nothing to what will be done. What we have beheld with astonishment we shall see infinitely surpassed.

The Mississippi, the Ohio, the Missouri, with their numberless confluent and affluent, are found to lave the very gardens of the world—virgin lands of extraordinary fertility, offered freely by governmental law and a liberal policy, on the easiest terms by which land can be purchased anywhere in the civilized world, and of the easiest access, even to those of the smallest means. Millions of acres are reached through these great water courses, where the plough has but to make its furrow, and the first season of cultivation gives back a generous reward to the husbandman.

It is, indeed, no wonder that the western prairies and the western hill-sides attract such throngs of human beings from the sterile fields and barren mountains of Europe, where life is a toil, and bread is black and hard to be obtained, or that the Anglo-Saxon should seek here to find broad fields and acres, pecuniary independence, a house that is a castle, and

a harvest-home whose merry gatherings are competence and peace.

The finest lands in Kansas and Nebraska, beyond the Mississippi, may be reached in eight days from New York—less time, indeed, than it once took to navigate a sloop between New York and Albany, when the tides were more relied upon than even the winds.

These circumstances alone must lead to the most prodigious results, not only in our own day, but for centuries to come. The future is not distant when empires, in space and population, will reach from the valleys of the Mississippi to the Pacific; and unless we lose sight of our own true interests, under the ægis of constitutional freedom, with one interest, one destiny. The future balance of power, the latitude and longitude of its seat, we leave for politicians to calculate. The geographer and the man of business may, however, inquire where will be the centre of the exchange and distribution between the east and the west.

Will the fabrics of Europe and of the Atlantic States be exchanged for the "treasures of Cathay" and the products of China and Japan, on some highway of water common to the Union and within easy distance of all? If so, on the banks of what river, and in what valley will they mingle? Who can think of the answer that must ere long be given to this question without deep emotion!

And that question is a national one; for the United States in 1870 will, at its present rate of increase, have more than a hundred millions of inhabitants, and the largest portion of them will be the citizens of the western States. These, with the certainty of never-failing products from the richest soil on the globe, will be the best customers of the mercantile world for their fabrics, their metals, and machinery. To their doors all these will be taken, and from their storehouses and granaries we shall receive all that we require in return. But where will this centre show itself? What point? What miracle of adaptation offers us our solution?

That we shall have numerous great cities in the west is demonstrated by the history of other agricultural countries? Their connexion with, and their dependence on, pastoral industry for their growth are the best assurance of their permanence and greatness, and this has been the case from age to age. The most populous nations have owed most to the cultivation and fertility of their soil. The numerical strength of Hindostan, China, Egypt in earlier times, and Russia at the present day, is attributable to the predominance of agricultural pursuits. Merely commercial nations, as a rule,

never have had such permanence. The largest portion of the population of the British empire, considering its dependencies as a part, lies beyond the little islands where her wealth and her intellect enshrine themselves. The population of her foreign possessions is more than one hundred and forty-three millions. London, great as she is, was great before her commerce became important, and Liverpool is but the expression of the agricultural and manufacturing power of the great inland towns.

Russia, without any foreign commerce to speak of before the time of Peter the Great, has so extraordinary a population for numbers that she boasts every sixteenth man born in the world is a Russian.

On the other hand the purely commercial States are more unstable, more in danger of reverses; their pursuits are much at the risk of life. More seamen and travellers have been lost at sea during the last year than would populate a modern colony. The chief ports of ancient times and of the middle ages have notoriously declined, while the purely inland cities, sustained by agriculture and the arts of husbandry, have yet a prolonged existence. Jerusalem rebuilt survives the wonder of pilgrims and of history. So lives Pekin, and so Moscow, and Vienna, and Paris.

We may, therefore, pronounce with entire confidence on the certainty of the growth of our inland cities of the west when mere commercial towns may cease to exist.

As these remarks of ours may find their way into the hands of readers of peculiar tastes as well as scientific attainments, we think it best to support our leading opinions by tables which some of our most eminent engineers have arranged:

It will be seen by referring to the map of the United States that the rivers which pass the city of Cairo on their way to the ocean are destined to bear the produce of the States of Tennessee, Kentucky, Ohio, Indiana, Illinois, Iowa, Wisconsin, and Missouri, and also in the winter many of the products of Michigan, to say nothing of those parts of Virginia and Pennsylvania watered by the upper branches of the Ohio, or of the vast tract watered by the Upper Missouri.

	<i>Acres.</i>
Kentucky contains.....	25,920,000
Ohio contains.....	25,000,000
Indiana contains.....	23,040,000
Illinois contains.....	38,080,000
Missouri contains.....	39,424,000
Iowa, say.....	39,000,000
Wisconsin contains.....	35,300,000
	<hr/>
Making.....	250,064,000
	<hr/> <hr/>

Thus, then, these eight States whose population is here

set down, are all dependent on the valley of the Mississippi, and on its rivers, for the outlet of the products and surplus resources derived from the cultivation of two hundred and fifty millions of acres, and five millions of inhabitants, five millions which in 1870 will be twenty-four millions. And even then there will be room for more; for while that estimate gives but sixty inhabitants to the square mile, we find that in England there are two hundred and twenty-five in the same space, in France one hundred and sixty-six, Belgium three hundred and forty-five, Austria one hundred and fifty-one. But in this table Kansas and Nebraska are left out, and the more distant territories on the slopes of the Rocky mountains.

We come next to consider what are the natural tendencies of the trade thus wonderfully developing, strengthened by the construction of numerous lines of railways, and what direction business must take, under the influence of natural causes assisted by those of art. These tendencies are no less than problems solved by physical geography.

The great valley of the Mississippi, laved by the father of waters, having seventy-six tributaries, all emptying themselves above its junction with the Ohio, is itself a marked feature on our map, a great channel of trade and commerce, in which there can be no competitor though it may have many allies. In this valley, wide, rich and fertile, we find one of the greatest rivers in the world, a facile route for the conveyance of human products, for the passage of emigrants and travellers, for the diffusion of knowledge and the formation and intercourse of States.

The Mississippi, then, with its affluent, the Missouri, and its confluent, the Ohio, is the great highway of the west: between its banks the tide of emigration will forever flow, and on its bosom the most precious freights never cease to be carried. The Nile itself, in its greatest usefulness, never approached in importance this river, Mississippi. Had its geographical direction been east and west instead of what it is, it might have become a barrier between the northern and southern States; but happily for us it is a perpetual bond of union, by its rise, its direction, and its terminus, and we should be the most ungrateful of nations if we did not so consider it.

Captain Cram, of the corps of United States Topographical Engineers, has not in the least overvalued, in his recent report on the valley of this river, the close relations it bears to its kindred valleys, and these are words of significance when we speak of those of the western world.

Captain Cram says that these valleys have an enormous extent. Into the Ohio drops that of Tennessee, with a river 850 miles long; the Cumberland, with one of 450; the Green river, 308; the Kentucky, 312; the Great Kanawha, 327; the Wabash, 477; the Monongahela, 216; the Muskingham, 216; the Alleghany, 300 miles. Into the Mississippi drops the Missouri, 3,217 miles long; the Kaskaskia, 250; the Illinois, 400; the Rock, 285; the Lower Iowa, 237; the Des Moines, 400; the Wisconsin, 580; the St. Peters, 400; while the Ohio and Mississippi themselves, receiving these rivers and draining these fertile valleys, are, the one 945 miles in length, and the latter 3,500. And nearly all these streams are navigable by steam, and all their waters may be said to mingle at one point, as if for the control and convenience of capital and enterprise, and all communicate with the ocean through the Gulf of Mexico. Taking them altogether, says Capt. Cram, we have a continuous navigable stream of 12,000 miles.

These are the great valleys, then, which are elongations of that of the Mississippi proper; but who has yet explored fully those which are watered by the fifty-six other rivers which swell its waters, none of them being less than one hundred miles, and several being four hundred miles in length?

The basin of the Mississippi has itself an area of over one million of square miles, double in size that of even the greatest rivers of China—such, for example, as the Yang-tse-Kiang.

North of the junction of the Ohio and Mississippi, the size of this basin is about 400,000 square miles, and this must by necessity discharge its products through and by the natural route.

But the eagle eye of American enterprise has already discovered all this. In fact, we are but registering a "foregone conclusion." The enterprising men who have congregated themselves on our great lakes saw at a glance that their location was favorable to two great interests—one eastwardly by the St. Lawrence or the New York canal; the other south and west to the cotton, sugar and tobacco regions, from which their valuable staples might be drawn, or to which merchandise might be sent at a cheaper rate than by any other routes.

It was this conception which brought Illinois into the field of internal improvement in advance, in fact, of her power to accomplish her purpose, and for a time endangered her credit and impaired her honor.

But the great work of the western world has finally been

accomplished, and we have a railway 704 miles in length, connecting Lake Michigan at its head with the Mississippi at a point where it has always deep water, and rarely, if ever, any obstruction from ice. Here we see the intelligent recognition of the greatness of the valley we have so imperfectly described, and not only that, but its results equally striking. For example, the northern terminus, Chicago, is mounting rapidly to the first rank of inland cities. We quote from the report of J. C. Bancroft Davis, esq., 1855, the following interesting facts :

“CHICAGO.—The city of Chicago is the terminus of the Chicago Branch ; of the Aurora road, which is fed from the northern branch between La Salle, or even as far south as Bloomington and Freeport ; and of the Chicago and Galena Union road, which is fed by the northern branch from Freeport up.

It is situated near the head of Lake Michigan, at the outlet of the Illinois and Michigan canal. To the east it has an uninterrupted navigation through Lakes Michigan and Huron, the river and Lake St. Clair, the river Detroit and Lake Erie, of more than 1,000 miles, and by the Welland canal with the Atlantic Ocean. On the west may be seen, over a nearly level prairie, the woods which skirt the Des Plaines, flowing into the Mississippi ; and behind it, without interruption to the Mississippi, are the most fertile lands in the United States. The growth of the city is miraculous. In 1831 there were twenty-three families in the town ; its present population is 75,000.”

The southern terminus is at the new city of Cairo, of which we have obtained, by the kindness of a subscriber, some maps which explain themselves.

On the Mississippi, 180 miles above Cairo, at the Missouri, stands the great and prosperous city of St. Louis, a place whose increase has been equally marvellous. The following shows how population has followed its position in this wondrous region :

“St. Louis.—The growth of the city of St. Louis, situated on the Mississippi, a few miles below the junction of the Missouri, is nearly as remarkable as that of Chicago.

Population of St. Louis in 1820, 4,123 ; in 1854, 125,000.”

Of Cincinnati, another of these western marvels, 508 miles above the junction of the Ohio and Mississippi, we need not speak particularly. Its position does not require it of us at this moment.

There remains, then, but one more view to take of the subject at present under consideration. We have Chicago and St. Louis as great centres of western trade and western population, and in all human probability there is yet another which will vie with if not surpass them both. This is the city of Cairo, at the junction of the two rivers, situated 180 miles below St. Louis, 509 below Cincinnati, where, as we have already intimated, the river is always deep and there is no obstruction from ice. Its latitude is 30° N., and its latitude 12° E. from Washington. As those of all alluvial delta are, its site is not elevated to any great height. It is 40 feet above the ordinary level of the river; but like most of the towns on the Mississippi, like St. Louis or Natchez under the hill, or New Orleans, or like Albany on the Hudson river, is liable to partial overflows at extraordinary seasons. Human ingenuity has successfully opposed a barrier to these floods, and the managers of the Illinois Central Railroad are securing this result for its own advantage. Levees along the banks and sectional levees across the base of the triangle made by the two rivers, leave nothing further to be apprehended from this source. Indeed, it would not be difficult to raise the whole site of the town far above the line of possible inundation by the transportation of earth from the high ground above, just as in New York, where we constantly fill up our river fronts to a depth of 50 feet, or create acres of new land at the Battery. No fears, however, appear to deter the numerous settlers who are erecting permanent habitations at Cairo, and who observe the stout old trees which guard the river banks and flourish undisturbed by its waters.

So far, then, as this is to be considered, we find Cairo at the worst only to be in the category of all the river towns, except that it is to be much better protected by artificial works, more easily constructed than in any of the lower towns. It has another pre-eminent advantage. There is no interruption to navigation below it. Its channels are deep and never ice bound. In all seasons it is reached by vessels of the largest river capacity, and to it and about it are concentrating all the great railways of the west. Travellers and freight, therefore, brought to this point by railway or otherwise, are always sure of reaching their final destination. While St. Louis and Cincinnati are for months shut up by the ice and droughts, Cairo suffers by no such impediments. Mr. Davis speaks very favorably of its position. He says:

“Cairo is situated at the most important confluence of rivers in the world. Below it the Mississippi is navigable at all times to the ocean. The magnificent rivers above it, both

to the west and east, are closed in the winter by ice, and in the summer nearly or quite so by drought, making travel uncertain, freights variable, and obliging traders to lay in stocks of goods for months before they are wanted to insure a supply. The Illinois Central Railroad furnishes at present the only railroad connexion for the greatest commercial city upon the Mississippi, the greatest commercial city upon the Ohio, the greatest commercial city upon the lakes, and the principal mining region of the United States with this point. It is possible to make hereafter, if the divided business will warrant it, shorter roads to it both from Cincinnati and St. Louis. But it must ever remain the most direct route from Cairo to Chicago and Galena, passing to each of them through the most fertile land of Illinois.

“Important as are these connexions, Cairo possesses independent resources. The supplies of groceries and other heavy goods for the interior of Illinois will naturally be shipped from this place. In return it will naturally become the exporting point for the produce of that country going south.

“There is also excellent reason for believing that it will become the great depot for coal for Mississippi steamers. Steamers are now supplied with this article from mines upon the Ohio. The nearest mine is at Muford, 115 miles above Cairo; the furthest, Pittsburg, 1,004 miles above it. It is brought down in flat-boats, towed by steam-tugs, and delivered, during the navigating season, directly from the river. But the winter and dry weather supplies also are obliged to be brought down during the season, and hauled up on the levee above high-water mark.

“The Desoto and Duquoin coal lies directly on the line of the Illinois road, from 61 to 74 miles from Cairo. It is of a quality quite equal to any of the Ohio coals.

“The amount of coal now required annually at Cairo is estimated at 450,000 tons.”

But it is not our intention to enter into the considerations in detail which are urged by the peculiar friends of Cairo. We are looking at it as the centre of “one stupendous whole.”

It would seem, then, almost past a doubt that the city of Cairo will become the great point to which the trade of the northwest and northeast must tend, and from which the supplies in return for these products must ascend for distribution. Here must be the great depot for freight and travel for the States dependent on the Mississippi, the Ohio, and the Missouri. Indeed, it may be styled the upper port of the Gulf, another and a better placed New Orleans.

But this point has other relations of a character which the political geographer may look at with no little interest. A great and important result is to be developed, enlarged, and retained, as yet not generally considered. The largest and most commercial States of the south upon the Atlantic will now seek here their share of this great western trade, for which New York, Pennsylvania, and Maryland have so warmly contended. It is found if a circle is described on the map of the United States, making the junction of the Mississippi and Ohio the centre, with a radius of 600 miles, it passes through the port of Charleston; if the radius be 560 miles, it will strike Savannah. But to reach New York, it must be at least 1,300.

If we pursue the same idea a little further we find a radius of 500 miles touches New Orleans, one of 450 Fulton, on the Red river, Mobile 440 miles, Philadelphia 800.

Thus we arrive at the important fact that it will be easier for the northwestern and western States, all that are compelled to use the Mississippi, Ohio, and Missouri to this point, to reach these southern Atlantic ports than those of Boston, New York, Philadelphia, or even Baltimore.

Already a line of railways from Charleston and Savannah is completed within 150 miles of Cairo. Thus, then, this point at the *embouchure* of the Upper Mississippi bringing with it the waters of the Missouri, the Illinois, the Wabash, the Ohio, the Cumberland, and the Tennessee, which last actually turn north to empty themselves at this geographical centre of rivers and States, will be within three days of Charleston and Savannah, and one day of Mobile when the intercommunication by railways shall be completed.

We perceive then at a glance what the two greatest southern Atlantic ports have the opportunity of gaining by a complete railway connexion with the Mississippi at Cairo. This connexion will be with a point as much beyond the influence of a severe climate as their own. If they make this, they may readily enter into a competition with Baltimore and New York for the western trade, and become the ports of the cities which, like St. Louis, are rising as by enchantment.

At present the railway communication between Charleston and Savannah and the valley of the Mississippi extends only to Nashville, on the Cumberland river. From that place to Cairo lines of steamers ply with great regularity. By a direct line the distance between Nashville and Cairo is about 150 miles. So that the distance from Nashville to Savannah by railway is about 583 miles, and to Charleston via Augusta

599 miles. About thirty hours, therefore, places the traveller from Nashville either at Charleston or Savannah, and a few hours more travel by rail would also place the traveller from Cairo at the same points.

This is but about nine hours more time than it takes the traveller from Baltimore to reach Wheeling, on the Ohio river; and when there he is more than 880 miles from Cairo, and controlled by a very uncertain navigation.

It is, therefore, a fixed fact that the great western trade and travel, at this moment, are more within the command of Charleston and Savannah than of Baltimore; that a large portion of both may be secured; that in the winter season it would have nearly all; and that Atlantic steamers and sailing packets would become matters of necessity to those cities.

Nor would this be all the result of a direct railway communication. Not only might Charleston and Savannah compete with Baltimore and New York, but with Mobile and New Orleans; and for the reason that the navigation of the Gulf is not only tedious but often dangerous. A sailing vessel is often as long getting from New Orleans to New York as it would be in crossing the Atlantic, besides being exposed to shipwreck on the Florida Keys and detention from cruisers in the Caribbean. In the mere difference of the rates of insurance these southern Atlantic routes would offer a large advantage.

We now come back, in conclusion, to the train of thought that induced us to look at the map of the United States with reference to its western topography, to see to what points were likely to become the new centre of trade and of population. The centre of population was, in 1787, on the right bank of the Susquehanna, in the State of Pennsylvania; in 1840 it had moved to Cincinnati; in 1870 it will, under the same circumstances and its own laws of progression, be near the junction of the Ohio and Mississippi; and still later, at some point to the westward, yet to be developed by the population of the new States and Territories.

We perceive that in all human probability, nay, we may almost consider it demonstrated, that the best point below the union of all the northern, northeastern, and northwestern tributaries of the Mississippi must be the centre of their trade. It is the nearest to all in the aggregate, and the most convenient for each individually. No ice, no want of water will obstruct navigation below this point. More favored in this respect than all other cities and towns above it on those tributaries, it presents advantages superior to them all.

It offers its stores of western products to the markets of New Orleans, Mobile, Charleston, Savannah. It commands the Gulf stream trade, and may that of the southern Atlantic. And it is thus we perceive the importance of this new centre, around which so many interests are to revolve.

Nor can we avoid the conclusion, to which we have been compelled to come, that if the southwestern railways commencing on the Atlantic be completed to Cairo, Georgia and South Carolina may boldly contend for the trade of Illinois and the other northwestern States and Territories. It has already been seen that they have the advantage over the northern ports, both as to climate, time, and distance. But may we not contemplate other results? Will not this new and profitable intercourse take away all excuses for any further jealousy of the northern States, which have advanced so rapidly under their system of internal improvements? Will there not be a greater equality in our domestic and foreign trade, strengthening our ancient resolution in the time that tried men's souls, to adhere to our Union and to denounce as treason the act which would impair its integrity? We are fond of comparative views of the works of nature, as well as those of art. So we may truly assert that nature, in her geographical arrangement of our northern continent, has placed the Mississippi in the best of all places for us. It has no local character, for it is too vast. It waters many States; it is the outlet of many streams; the drainer and fertilizer of many noble valleys. Scarce interrupted by a rock, or a cataract, it is navigable for thousands of miles; if it gathers its waters in the north, it pours them all out into the south—cooling the cauldron of the Gulf and tempering its climate. It is the very bond of peace and brotherhood. It holds us together by a perpetual chain, and every new advantage it confers upon us should brighten, not destroy, it.

As geographers, as statesmen, as men of business, and above all, as patriots, we must rejoice at developments such as these we have attempted to point out. We have found a new centre of our vast western population and its accompanying trade; we have shown what important results are in progress of accomplishment, and how, by natural causes as well as by the ingenuity of man, the United States are becoming more homogeneous.

To the west, then, we will look for the solution of the future.

THE PRESENT AND THE FUTURE OF NEW ORLEANS.

We published in our last the aggregate results of New Orleans commerce for 1854-5, and will give the details in our next and succeeding numbers. The following remarks, however, made by the Bulletin, are worthy of reflection by all who are interested in the growth of the city :

In closing this review of the course of our various markets for the year, we cannot omit the opportunity of reverting to the general considerations referred to in our preliminary remarks, and again calling the attention of our mercantile friends to the necessity of more earnest and united efforts to promote the prosperity of our trade, and the policy of the community at large to sustain our commerce, as the great means of adding to their general wealth, increasing population, and ultimately enhancing the value of real estate.

With regard to the western trade, we see such apathy on the part of our own citizens, while, at the same time, the Atlantic cities are engaging in the competition for it with increased means and energy, that we almost despair of retaining even that portion of it to which we are fairly entitled by our position, and which, with more capital and greater enterprise, we could exclusively command. To illustrate this it is only necessary to refer to the course pursued at the north in relation to the incoming cereal crops, which promise such abundant returns. Having already the facilities of canals and railroads extending to the remote west, and acting in harmony for their great purpose of diverting from the southern markets the western trade, their merchants might rest, contented with their apparent superior resources, and await the regular course of trade to bring the rich harvests of the west to their wharves. But not satisfied with the advantages they already possess with these material facilities, and their usual abundant supply of capital and banking facilities for the movement of the crop, they are stimulating its progress by an increased expansion of currency, to be employed in liberal advances to the western trade. Thus, some weeks ago, the New York press chronicled the negotiations pending for the use of large amounts of New England currency, to be used for the purpose ; and now we are informed, by one of their leading organs, that owing to the demand at the west for currency, for the purpose referred to, large amounts of the notes of the New England banks had been "arranged for" and transmitted to the west in place of coin ; that this operation had enabled these institutions to re-issue the circulation which had been returned during the bank contraction of last winter ; and that in consequence of these supplies of currency the balances at the credit of western banks and bankers in New

York had not been drawn for as expected, but, on the contrary, were increasing; and that hence it was evident that the crops would be sent forward without disturbing the present monetary position of the east and the west. Our readers are too well aware of the nature of these "operations," "arrangements," and other financial mysteries, not to know that their result is to fill the west with the notes of distant corporations, which once put in circulation by being paid to the farmer for his produce, remain for so long a time afloat that before they can, in the usual course of trade, be returned to their place of issue, the produce on which they have been advanced will have gone forward and be converted into exchange or specie for their redemption. It is true that by the creation of this fictitious capital speculation may be unduly excited, the commission merchant may be induced to advance more than the value of the produce, and ultimately be ruined in futile attempts at reclamations, and we may see a recurrence of those periodical embarrassments to which northern enterprise is constantly exposing northern commerce; but in the interim the north will have enjoyed the benefit of the trade; it will have helped to build up her cities, to furnish customers to her importers, to stimulate her manufactures, and, by a variety of smaller channels, to aggregate an increased population in her commercial marts, and advance the general prosperity. Hence it is that the population of the northern emporium has been augmented to upward of six hundred thousand souls—exhibiting an increase within a few years equal to the entire population of New Orleans. With such a formidable and daring rival, we must confess, we cannot but regard the western trade as steadily gliding from our hands, and that in a comparatively short period we may be destined to enjoy its profits only when an active export demand, booming rivers, and low freights give our natural facilities such a superiority over the artificial connexions of the north as will enable us to contend against her superior enterprise and capital. But, unfortunately for New Orleans, she is not exclusively dependent upon the western trade. Her port is, in fact, the outlet for an immense extent of country, unsurpassed for its fertility and the value of its crops; and while we regard with such interest the industrial and financial progress of the united north and west, we should never forget that their prosperity is sure to increase our own by enhancing the means of the consumer and extending the demand for the consumption of our leading staples. The old apprehension that the production of cotton would exceed the demand has ceased to alarm the planter, and we would be

hardly too sanguine to anticipate that in a very few years, the growth of this staple, in the Mississippi valley, might be doubled without advancing beyond the progress of consumption.

The internal improvements we have commenced, and those which are projected, cannot fail to bring into cultivation extensive districts to which our market has been hitherto inaccessible; and the time is fast approaching when we shall need population and slave labor more than we shall want lands or the means of carrying their products to market. Under the inevitable influence of the laws of supply and demand, this must lead to a gradual emigration to the south of slaveholders, with their slaves, from the States where they are now employed in the cultivation of crops, for which free labor can furnish a substitute. To stimulate this movement should be one of our chief objects. To illustrate our capacities and wants, in this connexion, we would refer to the following estimates, which show the immense extent of rich but unproductive cotton lands within the circle of our immediate influence. For example: taking the yield of 1852-3 as a basis, we find that the Louisiana crop was set down at 200,000 bales, raised on 400,000 acres of land, by 50,000 laborers; Arkansas at 100,000 bales from 200,000 acres and 25,000 laborers; and Mississippi at 650,000 bales from 1,300,000 acres and 162,000 laborers. Here is an aggregate of 950,000 bales from 1,900,000 acres, in three States, containing 12,000,000 acres of cotton lands, and capable of producing 6,000,000 bales, or double the entire crop of the United States at the present time, and requiring double the force now employed in cotton planting in the whole country, or six times the present amount in the States mentioned. A large portion of the lands that constitute this 12,000,000 acres are at present comparatively worthless from their inaccessibility; but railroads, and other internal improvements, are rapidly obviating the objection, and bringing within reach of our market lands which for all practical purposes have hitherto been valueless. Hence the great want to be supplied to increase the crop is not lands, of which there are a present abundance, but hands to work them; and if we have to rely upon only the natural increase of our own slave labor, it is manifest a long period must elapse before these southern wildernesses can be made productive. Regarding them, then, as an element to increase, by their production, the commerce of this city, it is equally manifest that there are two great objects to which the people of New Orleans should direct their attention. The first is the extension of our railroads, and other internal

improvements, so as to place within reach of this market productive cotton lands now inaccessible; the second, to invite, from the Atlantic cotton and western slave States, the immigration of planters with their slaves. Here, then, is a pregnant subject of inquiry. What advantages can we offer to such immigrants? Are our lands more productive than those of other States, and equally salubrious, whether for the white man or the negro? What statistics can we present in reply to these questions? and, if we can furnish evidence to warrant affirmative answers, what means should we adopt to hasten the movement referred to. In some of the western States and Territories strong efforts are constantly made to induce free laborers to immigrate within their borders, whether from the Eastern States or from Europe, for free white labor is the only power that can be used to bring forward the cereal wealth of their soil, and without it their boundless prairies would continue as desert as the ocean, and their fertile valleys remain a savage wilderness. And so of the south. Slave labor is the only power by which our uncultivated cotton lands can be made productive; and if there be any means by which that power can be increased, no effort should be spared by the people of New Orleans to use them to their full extent; we say by THE PEOPLE, for all are interested—the mechanic, the shop-keeper, the capitalist, and the owner of real estate, are all deeply interested as well as the merchant; but the merchant has the most at stake, and his enterprise, intelligence, and energy, should lead the column.

In these speculations we have confined ourselves to our leading staple, and the importance of inducing the immigration of slaveholders, not because cotton is the only basis of our prosperity, or slave labor the sole means of increasing our resources, but because it most forcibly illustrates our views. We are well aware of the importance of our other crops, and that the arguments applied to cotton can also, to a great extent, be used in relation to sugar. Nor do we overlook the importance of encouraging free laborers, also, whether from the west or the north, or from foreign countries, to supply us with the essential material of an industrial population, not only for such manufactures of the raw material as can be carried on by us with profit, but for all the superior branches in mechanical pursuits, which are above the capacity of the negro. Least of all do we overlook the fact that there are extensive districts of country, within our immediate control, unsurpassed for their salubrity, which furnish a wide field for the husbandman, and which,

if their peculiar advantages of an exuberant soil and genial climate were appreciated abroad, would soon be filled with a numerous, industrious, and hardy population.

To effect these various objects, union among our merchants is the first requisite, and to establish it we must once more suggest the expediency of an efficient organization, which for these, and all other purposes affecting our commercial welfare, should be the rallying point of our entire mercantile community. As we have before stated, something more is required than mere individual effort; and a chamber of commerce, organized on a sufficiently comprehensive basis, would, we suggest, meet the exigency and supply the want. Such an organization, with subordinate departments for the various branches of our business—boards of trade, for example, for cotton, sugar and molasses, tobacco, western produce, groceries, dry goods and imports, and navigation, which should receive periodically the reports of these several bodies, and act upon their recommendation for the general benefit with united power, could not fail to have a powerful influence.

The entire business of the city would thus come directly under the supervision of the chamber, and whenever it might be expedient to influence either municipal, State, or federal legislation, for the common interest, it could be done more efficiently by such a mercantile agency than by almost any other means. Opportunity would be afforded for the comparison of the various taxes on our trade with those of other cities, which, developing whatever is impolitic, wrong, or oppressive, would lead to its correction or removal; those internal improvements which prove of the most practical benefit to the city would be encouraged and promoted; and every enterprise calculated to increase our population and wealth would receive from it an active stimulus.

The chamber of commerce of New Orleans should embrace within its sphere all our domestic, interior, and foreign relations; it should take a comprehensive view of the field before it, and act with the circumspection, judgment, and energy, characteristic of the mercantile class.

An annual development of the trade of our city from such a source, comprehending detailed reports from each of the important interests we have designated, could not fail to have a beneficial influence in attracting, by its exposition of our resources, a productive population, and stimulating every remunerative branch of business.

If the people of New Orleans could be induced to unite for the promotion of its commercial and industrial improvement, independent of the tyranny of party, and superior to the in-

fluences of cliques, and classes, and individual interests, there can hardly be a doubt that a cheering change would be soon manifest in our progress, and that our southern emporium would attain that commanding position to which she is entitled by her unequalled natural resources.

MINING AND MANUFACTURES.

COTTON MANUFACTURES.

At a recent meeting of the Manchester Chamber of Commerce, some interesting statements were made by the president, Mr. Bazly, upon the cotton manufacture of Great Britain. From his remarks we quote the following :

“ In looking at the state of our foreign trade, he found that America was one great cause of the embarrassment that had prevailed amongst commercial classes in this country. The people of America were no doubt seriously embarrassed by the state of their financial arrangements ; but they seemed to overlook the fact that they were paying for their manufactures through their protective system a much larger amount, year by year, than had been involved by their unfortunate system of banking. He computed that not less than 30 millions sterling per annum were absorbed in the United States by the absurd protective system that ruled there. He hoped that the people of America would direct their attention to the cause of their suffering ; and that we should, at no distant day, have a reduced tariff from that great and growing country. (Hear, hear.) Our exports to France were really very trifling ; and the same unfortunate policy prevailed in France that prevailed in the United States. He had calculated, upon moderate estimates, that the people of France were now paying upwards of 50 millions sterling per annum, as the price of the protection with which they were blessed. (Hear.) France would probably be the richest country in Europe, if a liberal commercial tariff were established ; but there must almost of necessity be great embarrassment so long as this false policy was maintained. We looked for a relaxation of the restrictive tariffs in every part of the world ; and the example of England, he had no doubt, was really producing the most beneficial effect with every existing government. He would not anticipate the contents of the report by alluding to other subjects ; but he would inform gentlemen present that some months ago he was called upon by the eminent publishers of Edinburgh, the Messrs. Black, to

revise an article in the *Encyclopædia Britannica*, upon cotton and cotton manufacturers. He wrote a new article upon cotton, and considerably enlarged the article upon cotton manufacturers; and in the course of the enquiries and investigations he was led to make, he had been enabled to prepare a table, which he regarded as of some importance, for it was the first time that the manufacture of cotton had been shown in the way it was shown in the table. The Board of Trade very kindly gave him all the facts which he required from the department; and therefore, in the calculations he had made, he had depended entirely upon governmental authority. The Board of Trade, in publishing the returns of the exports of cotton, had usually stated the gross value sent out of the United Kingdom; but he had ascertained to what particular country every parcel of cotton manufactures was sent during 1853; he was thus able to show the value of the goods sent to each country, and by comparing that with the population, and ascertaining the amount per head, we should be able to define more correctly than upon any other principle the extent of our trade with any particular country.

“In the British dependencies in the East Indies we had a population of 150 millions; and the value of cotton manufactures exported to them in 1853 was £5,680,000, or equal to 9d. per head. To Russia, with its population of 67,000,000, our exports amounted to £180,000, or equal to 6-10d. per head; but to those parts of Russia supplied through ports in the Black Sea, with a population of 3,000,000, our exports amounted to £13,000, or 1½d. per head. France had 36,000,000 (or nearly 37,000,000) of population; and to France, in 1853, we sent cotton manufactures to the value of £155,710, or at the rate of 1d. per head. To British North America, with a population of 2,456,000, we exported £749,000 worth of cotton manufactures; which was equivalent to 6s. 1½d. per head. The United States, with a population of 27,000,000, took to the value of £4,182,901, or at the rate of 3s. 1d. per head. By the assistance of his friend, Mr. John Leisler, of this city, an eminent foreign merchant, he had been enabled to approximate as nearly as possible to the value of cotton manufactures consumed in Great Britain and Ireland; and he found that while our exports amounted to £32,712,000, we retained at home not less than £21,224,000 worth of cotton manufactures—showing that the people of the United Kingdom consumed our staple manufacture at the rate of 15s. 5d. per head per annum. The result in gross was this:

“To the population of the globe, about 850,000,000, Great Britain supplied cotton manufactures to the extent of very

nearly £54,000,000 sterling, being an average of 1s. 3½d. per head. The £53,000,000 or £54,000,000 sterling representing the products of the cotton industry of Great Britain and Ireland, might be regarded as one-half the cotton industry of the world. Foreign countries, besides taking one-half of the raw cotton sent into the market, received large supplies of cotton yarn from Great Britain; and in Asia and Africa cotton was still largely spun by hand. Hence the cotton industry of the world might be valued at £120,000,000 sterling, which would give an average consumption per year, for every man, woman and child upon the globe, 2s. 9¼d. worth of cotton manufactures, or about fourteen yards each per annum of excellent calico."

JOURNAL OF EDUCATION.

EDUCATION IN TEXAS.

Texas has one of the largest school funds in the Union, as appears from section 1 of the school law of Texas, which reads as follows :

"*SEC. 1. Be it enacted by the legislature of the State of Texas, That the sum of two millions of dollars of the five per cent. bonds of the United States, now remaining in the treasury of the State, be set apart as a school fund for the support and maintenance of public schools, which shall be called the special school fund, and the interest arising therefrom shall be apportioned and distributed for the support of schools as herein provided.*"

The State is divided into school districts, with three trustees to each. The chief justice and county commissioners constitute a board of school commissioners for each county, whose duty it shall be, during the year eighteen hundred and fifty-four, to form their respective counties into school districts of convenient size, and number the same, so that each district in a county shall be known by its appropriate number. Provided, however, that in forming said districts the convenience of neighborhoods shall be regarded as much as possible, and each school district shall contain a sufficient number of children for the maintenance of a school.

It is the duty of the assessor and collector of each county in the State to make out a list of all the free white population in his county between the ages of six and sixteen years, particularly designating the number of persons between such ages in each school district, and transmit the same under his

hand and official signature to the county clerk of the county, and a certified copy thereof to the treasurer of the State, on or before the first day of July, in each and every year.

The fund is distributed to each county "according to the number of its population of scholastic age," between six and sixteen. The money is applied only to the payment of teachers. Each county must furnish its own school-house and fixtures before it can draw any of the fund. If the fund is inadequate to pay the teachers, the trustees are required to collect the balance from the patrons of the school.

The treasurer of the State is *ex officio* superintendent of the common schools. The law reads as follows :

"SEC. 16. That the treasurer of the State shall be *ex officio* superintendent of the common schools in this State, and it shall be his duty, immediately after the first day of September, in each and every year, to record the abstracts of children of lawful age in the different counties and apportion the moneys as herein contemplated, distributing to the several counties the amount to which each is entitled, according to its scholastic population, ascertained in the manner herein prescribed, and also for the amount due for the tuition of children exempt from tuition fees ; and it shall further be the duty of the treasurer of the State to provide the necessary record books, to be by him kept exclusively for recording abstracts, as herein contemplated, and keeping a full and perfect account of all investments and moneys belonging, or in any way appertaining, to the common school fund of this State, and all apportionments and distributions of money by him made for common school purposes ; and he shall report to the governor annually, on or before the 1st day of October, the condition of the common school fund, and also make to each regular session of the legislature such suggestions in relation to the common school system as may be deemed advisable ; that the fiscal scholastic year shall commence on the 1st day of September, and end on the 1st day of August in each and every year, from and after the 1st day of September next."

COAL TRADE OF PITTSBURG.

According to a report read before the Pittsburgh Board of Trade, the amount of coal shipped from that port during the year ending September 1st, 1855, was 14,140,048 bushels floated in boats and flats, 507,277 bushels by canal, and 19,114,450 bushels in barges towed by steam tugs,—making an aggregate of 33,761,775 bushels.

JOURNAL OF HOME AND FOREIGN COMMERCE.

COMMERCE OF GREAT BRITAIN.*

The following return shows the comparative exports of Great Britain for 1854, as compared with 1852 :

British Exports.

	1850.	1852.	1854.
Chili.....}	£1,119,121	{ £1,167,494	£1,421,855
Peru.....}				1,024,007	949,283
Brazil.....	2,452,103	3,464,394	2,891,840
Uruguay.....	732,172	615,453	462,210
Cuba.....		1,033,396	1,038,159
Mexico.....	978,441	366,090	430,936
Venezuela.....}	216,751	{ 273,738	300,899
New Granada.....}				502,128	270,722
Hayti.....	939,802	251,409	195,653
British West Indies.....	2,671,969	1,908,552	2,000,380
British North America.....	2,089,327	3,065,364	3,980,876
Total.....	11,009,686	13,671,955	15,960,219
Australia.....	398,471	4,222,205	11,931,352
United States.....	6,132,346	16,568,757	21,410,369
Germany.....	4,463,605	7,820,480	8,564,827
France.....	475,884	2,731,286	3,175,200
Russia.....	1,489,538	1,099,917	54,301
Egypt.....	110,227	955,701	1,253,353
Turkey.....	1,149,310	2,079,913	2,758,605
Danubian Provinces.....		269,533	16,402
East Indies.....}	4,139,319	{ 7,352,908	10,025,909
China.....}				1,917,244	533,639
All others.....		19,381,476	21,414,724
Total.....	37,164,372	78,076,854	97,298,900

From 1831 to 1842 the English trade to her colonies increased more than to any other countries. Two causes were in operation, in 1842, against that extension. These were the China war, which produced its effect on that trade, and the emancipation in the West Indies that diminished the ability to buy goods. Two other causes, however, came into operation that had a powerful influence in extending the European trade. These were the extension of the Zollverein union, by which the means and ability of 28,000,000 of Germans to consume goods was greatly increased, and, by so doing, counteracted the effect of high duties on foreign goods, and accelerated their import. This is apparent in the exports

* From the United States Economist.

to Germany, Prussia, Holland, France, and Belgium, through all which countries the goods proceed to the Zollverein. Another and still more efficient cause was the large imports of corn into Great Britain from those countries. In 1836 England bought no foreign corn. In 1838-9 she bought largely, and, as the trade was a new one, she was obliged to pay in specie for the article. The continuance of the trade caused a reciprocity of commerce, and although England bought, in 1842, 22,202,512 bushels of wheat, she paid in goods only, and coin accumulated in the vaults of her bank to a great extent. Of the 22,205,512 bushels purchased by her, up to 1842, 17,536,477 bushels, worth \$25,000,000, were taken of the north of Europe. This naturally produced that increased export of goods to those countries which is apparent. The facts which have wrought out this increase of trade have been in opposition to the policy of the European governments. England was, however, compelled by a necessity above all law to buy bread. At first she was compelled, as the effect of former prohibition, to pay for it in specie. Such a trade cannot, however, exist. There can be no large continued purchases without corresponding sales; and as she was compelled to continue her purchases her exports necessarily increased, to the mutual benefit of England and Europe.

The growth of the United States, the progress of Europe, and the events of the gold discoveries and the existing wars, have operated greatly to change the currents of trade.

A large increase of business over 1852 is apparent; but nearly the whole increase, £19,700,000, was to Australia, East India, and the United States; and the increase was by no means a mark of prosperity, since the goods sent to Australia glutted the market and were nearly all lost; most of those sent to the United States were consigned and sold at ruinously low rates; and the India market absorbed more silver than was profitable. The China war greatly affected exports thither; but some were sent, via India. The war does not seem materially to have affected commerce. To France and Turkey there was an increase of the materials of war, and the exports to Russia and the Danubian provinces were nearly cut off. The year of 1853 was one of great speculation in the United States, and the exports hither from Great Britain were larger than ever before. As compared with 1853, the leading shipments were as follows:

	1853.	1854.
Australia.....	£14,513,700	&11,931,352
East Indies.....	8,185,635	10,025,905
North American Colonies.....	4,898,544	5,980,876
Other Colonies.....		
Total Colonies.....	33,382,202	33,898,313
United States.....	23,658,427	21,410,369
Germany.....	8,145,801	8,564,827
Russia.....	1,228,404	54,301

The exports to the northern continent of America have been as follows, at different periods :

	North American Colonies.	British West Indies.	United States.	Total.
1814.....	£4,399,753	£7,929,699	£8,129	£11,437,581
1820.....	1,559,104	4,197,151	6,124,825	11,971,145
1830.....	2,089,327	2,589,949	6,152,383	10,824,679
1842.....	2,333,225	2,591,425	3,528,807	8,463,757
1851.....	3,813,707	2,201,032	14,362,977	20,377,716
1852.....	3,065,064	1,908,551	16,134,397	21,107,913
1853.....	4,898,544	2,198,230	23,658,427	30,755,201
1854.....	5,981,875	2,008,380	21,410,369	29,399,625

The first line here shows the influence of the war which then existed. Great Britain sent as much goods here in that year as in 1820, but they came through the Canadas and West Indies. From the declaration of peace down to a late period, it was a leading object with the British government to prevent the trade of the two American continents from being concentrated in the United States, sooner or later, as the capital of the country and facilities for the transaction of business increased. British exports to their own West India colonies have become very small, by reason of the lessened ability of the islands to purchase. The trade of the whole continent has, however, increased; and the removal of restrictions upon intercourse between the United States and the colonies, together with the operation of the warehousing system, which has conferred upon American vessels the ability to make up assorted cargoes suited to all markets, on terms equal to any of the London docks, have contributed to draw all trade into the United States ports, and to make them the entry ports for European goods destined for the consumption of any American people. The following shows the United States exports to American countries, at different periods :

United States exports to the countries of America.

	1830.	1845.	1854.
Swedish West Indies.....	\$552,700	\$88,886	\$12,741
Danish West Indies.....	1,688,022	833,503	928,924
Dutch West Indies.....	319,492	352,817	371,380
French West Indies.....	792,241	599,907	651,673
British West Indies.....	140	4,504,367	5,475,407
British N. Am. Colonies....	3,650,031	4,844,966	15,204,144
Cuba.....	3,437,060	6,203,808	8,228,116
Spanish West Indies.....	245,636	688,148	990,886
Hayti.....	714,791	1,327,891	1,680,187
Mexico.....	985,764	784,154	2,091,870
Honduras.....	25,132	188,494	203,913
Central America.....	138,456	41,548	250,539
New Granada.....	.....	490,715	825,254
Venezuela.....	316,732	530,568	1,131,604
Brazil.....	1,600,999	2,413,567	4,046,857
Argentine Republic.....	425,220	483,561	658,720
Chili.....	913,718	1,257,360	1,942,330
Peru.....	32,400	33,424	651,707
Other South American Ports.	9,190	75,328	47,241
Northwest Coast.....	28,392	416,025	.....
Total.....	15,880,119	25,709,624	44,850,752
All other countries.....	43,681,960	73,590,152	207,197,054
Total.....	59,462,029	99,299,776	252,047,806

The opening of British ports to American shipping, under the proclamations of 1828-29, was followed, it appears, by a large increase in business, and the increase of trade between the islands and the United States may, in the stationary condition of those islands, account for a portion of their diminished traffic with the mother country. The concentration of American business in American ports is going rapidly on, and it has received great aid from the gold discoveries, since that event compelled the exploration of Central America and the construction of works that so facilitate the transportation as to bring hitherto inaccessible points within a short distance, at cheap rates. It has become incumbent upon the United States government to obtain rights of way and to protect its citizens in Central America, where improvement marches with rapid strides. The New Granada canal opens up a rich field for American enterprise. The Panama railroad has already united the oceans. The Mexican government is falling to pieces and will speedily be enveloped. British exclusiveness is broken down in all those places where her policy formerly presented barriers to American progress, and she is herself reaping large benefits from the

change, although she must follow the United States in the development of American trade. The condition of Cuba, alone, presents a chief difficulty to the extension of trade; but the march of events is such as soon to sweep away the difficulties. On the north the spirit of trade overcome the exclusiveness of British aristocracy, and the trade of the Canadas is becoming merged in that of the Union.

BANKS OF THE UNITED STATES.

The following table from the report of the Secretary of the Treasury will show the comparative condition of the banks of the United States, according to their returns, nearest the 1st of January, 1837, 1854, and 1855:

	1837.	1854.	1855.
Banks.....	788	1,208	1,300
Capital.....	\$290,772,091	\$301,376,071	\$332,177,288
<i>Resources.</i>			
Loans and discounts.....	525,115,702	557,397,779	576,144,758
Stocks.....	12,407,112	44,350,330	52,727,082
Real estate.....	14,064,451	22,367,472	24,073,801
Other investments.....	10,423,630	7,589,830	8,734,540
Due by other banks.....	59,663,910	55,516,085	55,738,735
Notes of other banks.....	36,533,527	22,659,066	23,429,518
Specie fund.....	5,366,500	25,579,253	21,935,738
Specie.....	37,915,340	.9,410,253	53,944,545
<i>Liabilities.</i>			
Circulation.....	149,185,890	204,689,207	186,952,223
Deposites.....	127,397,185	188,188,744	190,460,342
Due to other banks.....	62,421,118	50,322,462	4,151,697
Other liabilities.....	36,560,289	13,439,276	15,599,623
Aggregate immediate liabilities..	339,004,193	443,200,113	422,509,262
Aggregate immediate means....	139,479,277	162,164,657	155,048,537
Specie in depositories.....		25,136,252	27,188,869
Total specie in banks and treasury depositories.....		84,456,565	81,133,435

The increase of bank capital since 1837 is not at all in proportion to the great increase in the number of banks; nor, be it also remarked, is the increase of accommodation afforded. The aggregate specie strength is, however, much greater. The circulation is not so large as in 1854, but it is over thirty millions greater than in 1851; over fifty-four than in 1848; and over one hundred and twenty-eight millions than in 1843. The deposits have immensely increased. The total of immediate liabilities in 1855 was four hundred and twenty-

two and one-half millions, and that of immediate means only one hundred and fifty-five millions, showing a greater disproportion than in 1837 or 1843. In 1843 the proportion between immediate liabilities and immediate resources was one hundred and thirty-six millions to seventy-four millions, or less than double. In subsequent years the proportion is nearly treble.

TRADE OF RICHMOND.

We are indebted to an intelligent friend for the following carefully prepared and interesting tables of exports to foreign ports during the quarter ending September 30, 1855, and same time in 1854:

Destination.	TOBACCO.			
	1855.		1854.	
	Hogsheads.	Value.	Hogsheads.	Value.
Australia.....			20	\$6,720
Bremen.....	1,490	\$95,270	3,893	214,184
England.....	6,232	1,088,770	2,736	441,571
France.....	2,118	279,701	2,661	352,755
Holland.....	578	52,508		
Italy.....	1,940	305,693	1,640	234,858
Scotland.....	307	75,000		
	12,756	1,896,942	10,950	1,250,088

Destination.	FLOUR.			
	1855.		1854.	
	Barrels.	Value.	Barrels.	Value.
Australia.....	9,828	\$103,751	11,420	\$115,131
Brazil.....	42,519	549,272	20,259	191,121
British provinces.....			837	6,663
	52,347	553,023	32,516	312,915

Comparative statement of the exports of all articles during the quarter ending September 30, and same time last year.

Articles.	1854.		1855.	
	Quantity.	Value.	Quantity.	Value.
Bacon, pounds.....	385	\$59	240	\$50
Biscuit and ship bread, boxes.	4	80		
Books and maps.....		50		
Cables and cordage, cwt.....	50	900		
Corn, bushels.....	3,600	2,952		
Flour, barrels.....	32,516	312,915	52,347	553,023
Furniture.....		150		
Lard, pounds.....	1,866	2,427		
Lumber, M feet.....	5	112		
Manufactured tobacco, pounds	22,902	8,156	40,000	4,800
Manufactures of cotton.....		1,796		5,614
Manufactures of wood.....		2,005		60
Paper and other stationery.....		435		319
Rice, barrels.....	100	948		
Rosin and turpentine, barrels.	748	1,621	100	350
Soap, pounds.....			8,000	375
Staves, &c., M feet.....	79	3,519	37	623
Tobacco, hogsheads.....	10,950	1,250,008	12,756	1,896,842
Wheat, bushels.....			3,414	6,851
All other manufactured.....		6,840		450
All other raw.....		474		12
		1,595,527		2,469,469

Comparative statement of the imports into Richmond from foreign ports during the quarter ending September 30, 1855, and same time in 1854.

Articles.	1854.		1855.	
	Quantity.	Value.	Quantity.	Value.
<i>From England.</i>				
Blankets.....				\$297
Carpeting.....				1,963
Woollen goods.....				1,416
China, porcelain, earthen, and stoneware.....		\$2,820		
Railroad iron, tons.....	23,747	47,779	30,090	51,035
Salt, bushels.....	7,148	1,407		
<i>From British Provinces.</i>				
Plaster, unground.....		180		678
Cod liver oil, gallons.....	20	31		
Herrings and shad, barrels...	3,385	9,779	} 768	2,346
Mackerel, barrels.....	176	622		
Essence of spruce, barrels...	2	18		
Feathers, bags.....	3	62		
<i>From Brazil.</i>				
Coffee, pounds.....	480,000	67,443	801,600	66,997
		130,141		124,752

RECAPITULATION.

	Exports.	Imports.
During the quarter ending September 30, 1855.....	\$2,464,469	\$124,752
During the quarter ending September 30, 1854.....	1,595,527	130,141
Increase	873,942	.....
Decrease .....	.....	5,389

EXPORTS FROM THE UNITED STATES.

Official statement of the exports of cotton, breadstuffs, provisions, and rice, from the United States, for the fiscal year ending June 30 :

Export of breadstuffs and provisions, June 30.

Articles.	Packages.	Value.
Flour, barrels.....	1,204,540	\$10,896,908
Wheat, bushels.....	798,884	1,324,246
Corn, bushels.....	7,807,585	6,961,571
Meal, barrels.....	267,208	1,237,122
Rye meal, barrels.....	35,264	236,248
Bread, barrels, &c.....	153,287	657,783
Rye, oats, and other small grain.....	.....	238,976
Total breadstuffs.....	.....	21,557,854
Pork, barrels.....	294,440	4,390,970
Lard, pounds.....	29,025,492	4,018,016
Bacon, pounds.....	38,188,989	3,195,978
Beef, barrels and tierces.....	113,994	2,600,547
Butter, pounds.....	2,315,249	418,723
Cheese, pounds.....	4,846,568	514,034
Total breadstuffs and provisions.....	.....	36,696,131
Total of same in 1854.....	.....	65,901,240
Decrease in 1855.....	.....	29,205,109

Tobacco export, June 30, 1855.

Treasury year.	Hogsheads.	Value.
1855.....	150,213	\$14,712,468
1854.....	126,107	10,016,046
Increase.....	24,106	4,696,422

Rice export, June 30, 1855.

Treasury year.	Tierces & bbls.	Value.
1855.....	72,294	\$1,717,953
1854.....	105,121	2,634,127
Decrease.....	32,827	916,174

Distribution of tobacco export of 1855.

Country.	Hogsheads.	Value.
France.....	40,866	\$4,103,595
Great Britain.....	24,303	3,507,760
Bremen.....	35,058	2,497,730
Holland.....	17,124	1,068,782
Spain.....	7,524	756,848
Belgium.....	4,010	381,723
Sardinia.....	3,311	383,245
Papal States.....	2,446	276,019
Lombardy.....	2,945	412,224
Tuscany.....	1,562	171,621
Sweden.....	1,713	171,015
Africa.....	1,018	167,320
Other points.....	5,434	814,586
Total.....	150,213	14,712,469

Comparative export of the great staples.

Articles.	1855.	1854.
	Value.	Value.
Cotton.....	\$88,143,844	\$93,596,220
Bread and provisions.....	36,696,131	65,901,240
Tobacco.....	14,712,468	10,016,046
Rice.....	1,717,953	2,634,127
Total.....	141,270,396	172,147,633

SHIPPING OF THE WORLD.

The immense increase of the shipping of the United States (says the Baltimore American) furnishes one of the strongest and most satisfactory criterions of the magnitude of our commerce and the unparalleled prosperity of the country. It will doubtless surprise most of our readers to learn that, both in number of vessels and tonnage, the United States are ahead of Great Britain. The following table shows the com-

parative strength of the commercial marine of the principal nations of the world in 1854:

Country.	Vessels.	Tonnage.
United States.....	40,500	5,661,416
Great Britain and Colonies.....	35,960	5,043,270
France.....	14,354	716,130
Spain.....	7,986	379,421
Sardinia, Tuscany, Naples, Sicily, and Papal States...	17,066	546,021
Austria.....	7,603	324,447
Greece.....	3,970	264,981
Turkey.....	2,220	182,000
Holland.....	2,090	456,462
Hamburg.....	369	119,884
Bremen.....	500	160,000
Prussia.....	1,990	369,729
Denmark.....	4,789	208,109
Norway.....	852	368,362
Sweden.....	886	147,928
Mexico and the States of South America.....	1,530	193,735
Russia.....	.....	105,509

The shipping of the world is estimated at 145,500 vessels, and the aggregate tonnage at 15,500,000. Hunt's Magazine estimates that at \$50 a ton the shipping of the world is worth the enormous amount of \$775,000,000. Of this fifteen and a half millions of tonnage, more than ten and a half millions belong to the Anglo-Saxon race.

PITTSBURGH.

We have received the first annual report of the Board of Trade at Pittsburgh. It embraces much information in relation to the growing trade of that important city. The following is an extract:

<i>Average number of arrivals and departures at this port annually.</i>	
1st class steamers.....	1,712
2d class steamers.....	3,634
Keel-barges and flat-boats.....	3,230
	<u>8,576</u>
Estimated amount of merchandise arriving and departing from this port in steam and keel boats, annually, by the river.....	<i>Tons.</i> 740,460
Lumber.....	50,000
Coal, in barges and flats, departing.....	847,700
	<u>1,638,160</u>
<i>Steamboats built and registered in this district in 1854.</i>	
	<i>Tons.</i>
Passenger steamers, 51.....	11,044 44-100
Freight and tow boats, 19.....	2,793 33-100
	<u>13,797 47-95</u>

Carrying capacity.....	25,000 tons
Cost.....	\$1,255,338
Consuming, per 24 hours, 28,000 bushels of coal.	
In addition to the above there were eight boats built, but not yet registered, amounting to 3,500 tons, and costing.....	300,000
	<u>1,555,338</u>
Lumber in rafts, departing.....	1,225,000
Amount of coal shipped from here, bushels.....	23,738,906
Worth when sold.....	3,000,000
<i>Manufactured here and sent by river.</i>	
	Valued at—
Iron and nails.....	\$7,500,000
Castings.....	700,000
Stoves.....	300,000
Springs and axes, vices and spring steel.....	566,000
Shovels, forks, picks, axes, &c.....	390,000
Locks, latches, scales, &c.....	350,000
Iron safes.....	60,000
Steam engines, (exclusive of those placed in boats here,) sugar and cotton mills, &c.....	500,000
White and red lead and litharge.....	640,000
Cotton yarns, sheetings, &c.....	949,000
Glass—Flint.....	\$650,000
Window.....	800,000
Bottles, vials, &c.....	400,000
	<u>2,050,000</u>
Wagons, carts, wheelbarrows, carriages, &c.....	350,000
Plows and farming implements.....	75,000
Furniture.....	100,000
Salt in barrels.....	80,000
Soda ash, 2,000 tons.....	130,000
Ale, porter, beer, and malt.....	\$780,000
Of the above shipped by river.....	450,000

COINAGE.

The coinage of France, the United States, Great Britain, and Russia, for the last two years, was as follows:

	1853.		1854.	
	Gold.	Silver.	Gold.	Silver.
United States...	\$55,213,907	\$8,907,571	\$52,094,595	8,619,270
France.....	62,035,899	3,766,833	98,812,500	375,000
Great Britain...	58,270,126	3,401,270	20,091,680	677,600
Russia.....	15,723,750	2,700,100	15,723,750	2,700,100
Total.....	191,243,682	18,845,774	186,722,525	12,371,970

The coinage of gold has taken the place of silver almost altogether, except in the United States, where the new coinage act has operated effectively since 1852. The aggregate coinage of the four countries, during seven years, has been as follows :

Total coinage of gold and silver in Great Britain, France, the United States, and Russia, for the last seven years—1848 to 1854, both inclusive:

Year.	Gold.	Silver.	Total.
1848.....	\$33,285,710	\$23,428,570	\$56,714,280
1849.....	38,500,000	44,642,860	82,142,860
1850.....	71,500,000	21,642,860	93,142,860
Three years.....	142,285,710	89,714,290	233,000,000
1851.....	152,642,860	17,244,290	169,887,150
1852.....	120,357,150	18,857,150	139,214,300
1853.....	191,785,720	19,142,860	210,928,580
1854.....	184,214,290	12,214,290	196,428,580
Four years.....	659,000,020	67,428,290	716,428,610
1848 to 1854.....	791,285,730	157,142,880	948,428,610

In the three years ending with 1850, silver was 40 per cent. of the whole coinage; in the four years ending with 1854 it was only 9 per cent. of the coinage in the above four countries. In 1850 Belgium stopped coining gold, and in 1853 Holland ceased to coin that metal. In Austria, where the currency is paper really, and silver legally, that metal has been coined as usually, and the material has been furnished from France, where it has been supplanted by gold. Including all the above countries, with Prussia, the coinage has been, in seven years, \$1,097,584,300, of which about 15 per cent. has been silver. The production of that metal is now greater.

A document has been published in Mexico, under the title of "Foreign Commerce of Mexico since the Conquest," which contains interesting statistics concerning the amount of gold and silver yielded by the mines of that country. The entire worth of gold and silver stamped by the different mints of Mexico from 1524 to 1852, together with manufactures from the precious metals, amounts to the sum of \$3,562,205,000, viz:

Silver coined in the city of Mexico.....	\$2,248,165,000
Gold coined in the city of Mexico.....	111,806,000
Total.....	2,359,971,000
Silver coined in other Mexican towns.....	359,621,000
Gold coined in other Mexican towns.....	15,113,000
Total.....	374,734,000
Gold and silver manufactures.....	827,500,000
Grand total.....	3,562,205,000

The whole of this sum, with the exception of about

\$100,000,000, has been, it is supposed, exported. In the year 1690 the amount of silver coined in the city of Mexico was \$5,286,000; in the following year it was \$6,214,000. From 1691 until 1700, the quantity decreased until it amounted to only \$3,379,000. After the latter year it steadily rose until it reached, in 1809, its highest point, viz: \$24,708,000. In 1810, only \$17,951,000 were coined; in 1811, but \$8,956,000, and so on till 1837, when but \$516,000 of silver were issued by the Mexican mint. In 1838, \$1,089,000 were coined, and the quantity again began to increase. In 1852, it amounted to \$2,770,000.

ICE—HOW MUCH OF IT IS USED AND WHERE IT COMES FROM.

Ice is an American institution—the use of it an American luxury—the abuse of it an American failing. As in the matter of luxuries, as in government, we are democratic and popular, the great mass of people moving, living, and having a being in America, can and do enjoy those creature comforts of existence daily, which are, in European nations, the Sabbath wonder of the humbler domestic circles. Very often that Sabbath does not come once a week for large portions of the people in Ireland, Scotland, parts of France, Germany, Italy, England, and, in fact, all over the European continent. The use of ice is esteemed a rare blessing there, and like all good things beyond the water, is adopted by the aristocracies. Dietetically, the poorer, and even middle classes, know nothing of ice. It is confined to the wine cellars of the rich, and the cooling pantries of first class confectioneries. The climate in some portions of the countries specified does not render it an actual necessity, but at certain periods of the year, in almost all of them, the temperature does not vary much from that in New York, with the difference that our heat is more continuous.

In America the use of ice is as widely extended among the people as the heat is, and with a very trifling individual cost. We use it for seven or eight months of the year—all the year in the south; and even in New York there are numbers of families who ice their Croton throughout the winter. In this latter particular, and in the too free and careless use of it in the hottest days of summer, the abuse of the luxury consists. It is considered by physicians as a tonic; but an excess, as in the use of intoxicating liquors, will, in all probability, produce diarrhœa.

Ice is the most tolerated equalizer of the day, bringing within the benefits of its mission every type of liquor imbibed, assuaging the tongues of oratorical politicians of all classes, and sending a judicious temperature through the diaphragm

of every excited individual who breathes in our midst. From the epicurean loiterer who enjoys his iced champagne and trout over Lake Saratoga, to Prof. Water Cure who, though he never gets "three sheets in the wind," constantly gets more than that number in water; from Hon. "Brandy Smash" to the dispenser of root beer and soda, with "every variety of choice syrups;" from the steam factories of ice cream to the cent-a-class hand manufactories on the pathways and pavements in and about the Park, all are enlivened, cheered and actuated by ice. In workshops, composing rooms, counting houses, workmen, printers, clerks, club to have their daily supply of ice. Every office, nook or cranny, illuminated by a human face, is also cooled by the presence of his crystal friend.

It is as good as oil to the wheel. It sets the whole human machinery in pleasant action, turns the wheels of commerce, and propels the energetic business engine. In every house almost there is a vein of ice, beginning with the blocks in the cellar and going through the refrigerators and filters on every story to the attic.

While the extended use of ice is paramount to all, few, while imbibing their glass of iced water, the cost of which is entirely too fractional to calculate, think of the value or the capital invested in dispensing it. In this respect it resembles the daily paper, which is furnished every morning for two cents, and in the perfection of which hundreds of dollars, and great mental and physical activity and energy are daily expended. To get one of the minor items in the paper, as the little piece of ice in the glass, hundreds of miles have been travelled perhaps, and a great expense incurred.

The statistics of ice are exceedingly interesting, and illustrate the go-ahead principle and enterprise which characterize every branch of our commercial tree. It is just fifty years since the idea of dispensing ice to southern latitudes entered the brain of a Boston merchant, Mr. Tudor. It was a thoroughly worthy notion of a solid man of that City of Notions. For twenty years, considerable disappointment, with various success, attended his efforts, but ultimately his persistency and activity furnished the southern States and the West Indies with the frozen delicacy, and a lucrative business opened up. In 1834 the East Indies and Brazil became his business clients. Other large houses engaged in the ice-farming in Massachusetts and New York, and at present the value of the ice farms of those States fully equals, if it does not exceed, the value of the rice crop of Georgia.

Boston chiefly supplies the southern ports with ice, and

the increase of the trade in that city may be seen from these facts. In 1832 the whole amount shipped from port was 4,352 tons. In 1845 there were 48,422 tons exported; in 1853, 100,000 tons; and in 1854, 156,540 tons. It is stated that "the railroads receive some \$90,000 for transporting ice, and those who bear it over the sea from \$400,000 to \$500,000." In Hunt's Merchants' Magazine for the present month, there are a mass of very interesting statistics on the ice trade, from which we compile the tables which we shall present to our readers. Boston finds favorable markets in Havana, Rio Janeiro, Callao, Demerara, St. Thomas, and Peru. Its best customers, however, are the southern States of the Union and the East Indies. Boston sent last year—

<i>Tons.</i>		<i>Tons.</i>	
To southern States.....	110,000	To England.....	825
To East Indies.....	14,284	Consumed in Boston.....	60,000
To other places named above..	31,361		
Total.....			216,540

In the ice-houses in the vicinity of Boston there were 300,000 tons stored last year. In the exportation of the amounts given above, there were 520 vessels engaged, the heaviest tonnage in the Boston trade being in the ice business.

In New York, nearly the entire crop of ice is used at home. It is gathered at the following places, and in the annexed proportions:

<i>Tons.</i>		<i>Tons.</i>	
Rockland Lake.....	120,000	Athens.....	15,000
Kingston Creek and vicinity..	60,000	Tarrytown.....	12,000
Highland Lake.....	30,000	New Rochelle.....	10,000
Rhinebeck.....	18,000	Total.....	285,000
Catskill.....	20,000		

Besides this, for the general home market, the following amounts are secured and laid up in the annexed towns on the Hudson for their own use:

<i>Tons.</i>		<i>Tons.</i>	
Albany.....	20,000	Hudson.....	4,000
Troy.....	10,000	Newburg.....	4,000
Poughkeepsie.....	4,000		
Total.....			44,000

Central and western New York are supplied from Onondaga Lake. The whole amount secured in New York may be estimated at about 340,000 tons, of which only about 20,000 are exported. The value of this crop is fully three-fourths of a million dollars annually, the lowest price being \$2 per ton—large quantities being sold at \$2 50 and \$3. The western markets—Cincinnati, Chicago, &c.—are supplied from the great lakes, and the markets on the Mississippi river principally from the town of Peru, in Illinois.

In Boston there are between two thousand and three

thousand persons employed in the business season. In New York the amount is less, as the exportation is little. About nine thousand persons are employed in the entire States by ice, and it is computed that a capital of over six million dollars is invested in it.

PHILADELPHIA.

ASSESSMENT OF REAL AND PERSONAL PROPERTY.

The following is given as the official assessment of the value of the property in the city of Philadelphia, as assessed for city and State purposes:

Real estate	- - - - -	\$142,136,202
Number of personals	- - - - -	94,566
Value of furniture	- - - - -	2,166,450
Money at interest, mortgages, stocks, &c	- - - - -	17,609,898
Horses and cows, number	- - - - -	501,929
Emoluments of office	- - - - -	133,334
Gold levers, number	- - - - -	3,880
Plain gold and silver levers	- - - - -	1,121
Plain silver watches	- - - - -	121

The real estate, as assessed in the various wards, the money at interest, &c., will be seen by the following table:

Wards.	Real Estate.	Money at interest, mortg'e, stocks, &c.
First.....	\$3,502,180	\$2,000
Second.....	4,512,957	17,650
Third.....	2,522,058	.....
Fourth.....	2,570,640	1,220
Fifth.....	13,264,600	5,615,198
Sixth.....	20,753,782	796,422
Seventh.....	6,250,300	1,008,355
Eighth.....	12,024,872	3,543,531
Ninth.....	15,265,300	2,300,924
Tenth.....	7,754,533	1,394,899
Eleventh.....	4,306,544	142,090
Twelfth.....	3,773,265	411,775
Thirteenth.....	4,059,035	229,608
Fourteenth.....	4,851,446	12,400
Fifteenth.....	5,771,831	116,310
Sixteenth.....	2,607,195	7,100
Seventeenth.....	1,840,321	.....
Eighteenth.....	2,300,297	11,612
Nineteenth.....	5,052,730	5,500
Twentieth.....	4,951,048	43,780
Twenty-first.....	2,647,200	259,697
Twenty-second.....	3,000,000	960,009
Twenty-third.....	4,248,800	549,240
Twenty-fourth.....	4,305,248	250,967
Total.....	142,136,202	17,609,898

AGRICULTURAL AND HORTICULTURAL JOURNAL.

AGRICULTURE IN ALL AGES.

No. II.*

II. THE AGRICULTURE OF THE GREEKS.—Revelation has taught us to offer up our prayers and thanksgivings for all benefits to the one omni-beneficent Creator and provider of the universe. The less enlightened ancients, whose religion was mythological, equally convinced with ourselves of the existence of some divine first cause and providence, like us offered up their votive petitions and hymns of praise, though the objects of their worship were as many as the benefits or the evils to which man is subject.

Agriculture was too important and too beneficial an art not to demand, and the Greeks and Romans were nations too polished and discerning not to afford to it, a very plentiful series of presiding deities. They attributed to Ceres—as their progenitors, the Egyptians, did to Isis—the invention of the arts of tilling the soil. Ceres is said to have imparted these to Triptolemus, of Eleusis, and to have sent him as her missionary round the world to teach mankind the best modes of ploughing, sowing, and reaping. In gratitude for this, the Greeks, about 1356 years before the Christian era, established, in honor of Ceres, the Eleusinian mysteries, by far the most celebrated and enduring of all their religious ceremonies; for they were not established at Rome till the close of the fourth century. Superstition is a prolific weakness; and, consequently, by degrees, every operation of agriculture, and every period of the growth of crops, obtained its presiding and tutelary deity. The goddess, *Terra*, was the guardian of the soil; *Stercorivius* presided over the manures; *Volutia* guarded the crops whilst evolving their leaves; *Flora* received the still more watchful duty of sheltering their blossom; they passed to the guardianship of *Lactantia* when swelling with milky juices; *Rubigo* protected them from blight; and they successively became the care of *Hostilina*, as they shot into ears; of *Matura* as they ripened; and of *Tutelina* when they were reaped. Such creations of polytheism are fables; but they are errors that should even now give rise to feelings of gratification rather than of contempt. They must please by their elegance; and much more when we reflect that it is the concurrent testimony of anterior nations, through thousands of years, that they detected and acknowledged a Great First Cause.

Unlike the arts of luxury, agriculture has never been subject to any retrograde revolutions; being an occupation necessary for the existence of mankind in any degree of comfort, it has always continued to receive their first attention; and no succeeding age has been more imperfect, but in general more expert, in the art than that which has preceded it. The Greeks are not an exception to this rule; for their agriculture appears to have been much the same in the earliest brief notices we have of them, as it was with the nation of which they were an offshoot; The early Grecians, like all new nations, were divided into but two classes: landed proprietors, and *Helots*, or slaves; and the estates of the former were little larger than were sufficient to supply their respective households with necessaries. We read of princes among them; and as we dwell upon the splendid details of the Trojan war, associate with such titles, unreflectingly, all the pageantry and luxury of modern potentates that are distinguished by similar titles. But in this we are decidedly wrong; for there was probably not a leader of the Greeks who did not, like the father of Ulysses, assist with his own hands in the farming operations.—(*Homer's Odys.*, 1, xxiv.) Hesiod is the earliest writer who gives us

* From Johnson's Farmer's Encyclopædia.

any detail of the Grecian agriculture. He appears to have been the contemporary of Homer, and, in that case, to have flourished about nine centuries before the Christian era. His practical statements, however, are very meager; we have, therefore, preferred taking *Xenophon's Economics* as our text, and introducing the statements of other authors, as they may occur, to supply deficiencies or to afford illustrations.

Xenophon died at the age of ninety, 359 years before the birth of Christ. The following narrative of the Greek agriculture is from his "Essay," if not otherwise specified.

In Xenophon's time the landed proprietor no longer labored upon his farm, but had a steward as a general superintendant, and numerous laborers, yet he always advises the master to attend to his own affairs. "My servant," he says, "leads my horse into the fields, and I walk thither for the sake of exercise in a purer air; and when arrived where my workmen are planting trees, tilling the ground, and the like, I observe how everything is performed, and study whether any of these operations may be improved." After his ride, his servant took his horse, and led him home, "taking with him," he adds, "to my house such things as are wanted, and I walk home, wash my hands, and dine off whatever is prepared for me moderately." "No man," he says, "can be a farmer, till he is taught by experience; observation and instruction may do much, but practice teaches many particulars which no master would ever have thought to remark upon." "Before we commence the cultivation of the soil," he observes, that, "we should notice what crops flourish best upon it; and we may even learn from the weeds it produces what it will best support."

"*Fallowing*, or frequent ploughing in spring or summer," he observes, "is of great advantage;" and Hesiod advises the farmer (*Works and Days*, 50) always to be provided with a spare plough, that no accident may interrupt the operation. The same author directs the ploughman to be very careful in his work. "Let him," he says, "attend to his employment, and trace the furrows carefully in straight lines, not looking around him, having his mind intent upon what he is doing."—*Ibid.* 441—443.

Theophrastus evidently thought that the soil could not be ploughed and stirred about too much, or unseasonably; for the object is to let the earth feel the cold of winter and the sun of summer, to invert the soil, and render it free, light, and clear of all weeds, so that it can most easily afford nourishment.—(*De Causis Plant.* lib. iii. cap. 2, 6.)

Xenophon recommends green plants to be ploughed in, and even crops to be raised for the purpose; "for such," he says, "enrich the soil as much as dung." He also recommends earth that has been long under water to be put upon land to enrich it, upon a scientific principle which we shall explain under IRRIGATION. Theophrastus, who flourished in the fourth century B. C., is still more particular upon the subject of *Manures*. He states his conviction that a proper mixture of soils, as clay with sand, and the contrary, would produce crops as luxuriant as could be effected by the agency of manures. He describes the properties that render dungs beneficial to vegetation, and dwells upon composts.—(*Hist. of Plants*, ii. cap. 8.) Xenophon recommends the stubble at reaping time to be left long, if the straw is abundant, "and this, if burned, will enrich the soil very much, or it may be cut and mixed with dung." "The time of sowing," says Xenophon, "must be regulated by the season; and it is best to allow seed enough."

Weeds were carefully eradicated from among their crops; "for, besides the hindrance they are to corn, or other profitable plants, they keep the ground from receiving the benefit of a free exposure to the sun and air." Homer describes *Laertes* as *hoing*, when found by his son *Ulysses*.—(*Odys.* xxiv. 226.)

Water-courses and *ditches* were made to drain away "the wet which is apt to do great damage to corn."

Homer describes the mode of *threshing* corn by the tramping of oxen (*Iliad*, xx. lin. 495, &c.) and to get the grain clear from the straw, Xenophon observes, "the men who have the care of the work take care to shake up the straw as they see occasion, flinging into the way of the cattle's feet such corn as they observe to remain in the straw." From Theophrastus and Xenophon combined, we can also very particularly make out that the Greeks separated the grain from the chaff by throwing it with a shovel against the wind.

III. THE AGRICULTURE OF THE ROMANS.—It is certain, that at a very early

age Italy received colonies from the Pelasgi and Arcadians; and that, consequently, with them the arts of Greece were introduced; and we may conclude that there was then a similarity in the practice of agriculture in the two countries.

About 753 years before the nativity of Christ, Romulus founded the city of Rome, whose inhabitants were destined to be the conquerors and the improvers of Europe. The Roman eagle was triumphant in Egypt, Persia, Greece, Carthage, and Macedon; and the warriors who bore it on to victory, in those and other countries, being all possessors of land of a larger or smaller extent, naturally introduced, upon their return, any superior vegetable or improved mode of culture, which they observed in those highly civilized seats of their victories.

Thus the arts of Rome arrived at a degree of superiority that was the result of the accumulated improvements of other nations; and, finally, when Rome became in turn the conquered, the victors became acquainted with this accumulated knowledge and diffused it over the other parts of Europe.

Of the agriculture of the early Romans we know but little; but of its state during the period of their greatest prosperity and improvement we, fortunately, have very full information. Cato in the second, and Varro in the first century before the Christian era, Virgil, at the period of that event, Columella and Pliny but few years subsequently, and Palladius in the second or fourth century, each wrote a work upon agriculture, which, with the exception of that by Columella, have come down to us entire.

From these various authorities we derive full information; and we are convinced that many of our readers will be surprised at the correct knowledge of the arts of cultivation possessed by that great nation.

1. *Size of the Roman Farms.*—When Romulus first partitioned the lands of the infant State among his followers, he assigned to no one more than he could cultivate. This was a space of only two acres.—(Varro, i, 10; Pliny, xvii, 11.) Cincinnatus, Curius Dentatus, Fabricius, Regulus, and others distinguished as the most deserving of the Romans, had no larger estates than this. Cincinnatus, according to some authorities, possessed only four acres.—(Ibid.; Columella, i, 3, &c.) On these limited spaces they dwelt, and cultivated them with their own hands. It was from the plough that Cincinnatus was summoned to be dictator, (Livy, iii, 26;) and the Samnian ambassadors found Curius Dentatus cooking his own repast of vegetables in an earthen vessel.—(Plutarch, in vita Cato. Cens.)

Some of the noblest families in Rome derived their patronymic names from ancestors designated after some vegetable, in the cultivation of which they excelled, as in the examples of the Fabii, Pisones, Lentuli, Cicerones, and the like.—(Pliny xvii, 1.) In those days, “when they praised a good man, they called him an agriculturist and a good husbandman; he was thought to be very greatly honored who was thus praised.”—(Cato, in Praef.) As the limits of the empire extended, and its wealth increased, the estates of the Roman proprietors became very greatly enlarged; and, as we shall see more particularly mentioned in our historical notices of gardening, attained a value of 80,000*l.*—(Plutarch, in vit. Marius et Lucullus.) Such extensive proprietors let portions of their estates to other citizens, who, if they paid for them a certain rent, like our modern tenants, were called *Coloni*, (Columella, i, 7; Pliny, Epist., x, 24,) and *Politores*, or *Partiarii*, if they shared the produce in stated proportions with the proprietor.—(Pliny, Epist., vii., 30, and ix, 37, &c.) Leases were occasionally granted, which appear to have been of longer duration than five years.—(Ibid., ix, 37.)

2. *Distinction of Soils.*—Soils were characterized by six different qualities, and were described as rich or poor, free or stiff, wet or dry.—(Colum., ii, 2.)

The best soil they thought had a blackish color, was glutinous when wet, and friable when dry; exhaled an agreeable smell when ploughed, imbibed water readily, retaining a sufficiency and discharging what was superfluous; not injurious to the plough-irons by causing a salt rust; frequented by crows and rooks at the time of ploughing; and, when at rest, speedily covered with a rich turf.—(Virg. Georg., ii., 203, 217, 238, 348; Pliny, xvii, 5.)

Vines required a light soil, and corn a heavy, deep, and rich one.—(Virg. Georg., ii, 29; Cato, vi.)

3. *Manures.*—The dung of animals was particularly esteemed by the Romans for enriching their soil. “Study,” says Cato, “to have a large dunghill.”—(Cato, v.) They assiduously collected it and stored it in covered pits, so as to check the escape of the drainage.—(Colum., i, 6; Pliny, xvii, 9, and xxiv, 19.)

They sowed pulverized pigeons' dung and the like over their crops, and mixed it with the surface soil by means of the sarcle or hoe.—(*Colum.*, i, 16; *Cato*, xxxvi.) They were aware of the benefit of mixing together earth of opposite qualities, (*Ibid.*,) and of sowing lupines and ploughing them in while green.—(*Varro*, i, 23.) They burnt the stubble upon the ground, and even collected shrubs, and the like, for the similar purpose of enriching the soil with their ashes.—(*Virg. Georg.*, i, 84; *Pliny*, xvii, 6, 25.)

Pliny also mentions that lime was employed as a fertilizer in Gaul, and marl in the same country and Britain; but we can only surmise, hence, that they were also probably employed by the Romans.—(*Pliny*, xvii, 8, and xvii, 5.)

4. *Draining*.—The superfluous water of soils was carried off by means both of open and covered drains.—(*Colum.*, ii, 2, 8; *Pliny*, xvii, c.; *Virg. Georg.*, i, 109.) *Cato* is very particular in his directions for making them.—(*Cato*, xliii, clx.)

5. *Crops*.—They cultivated wheat, spelt, barley, oats, flax, beans, peas, lupines, kidney-beans, lentils, tares, sesame, turnips, vines, olives, willows, and the like. To cite the authorities who mention each of these would be needless, for they are noticed by all the Roman writers upon agriculture. Of the relative importance or proportion in which the crops were profitable to the Romans we have this judgment of *Cato*: "If you can buy 100 acres of land in a very good situation, the vineyard is the first object if it yields much wine; in the second place, a well watered garden; in the third, a willow plantation; in the fourth, an olive ground; in the fifth, a meadow; in the sixth, corn ground; in the seventh, an under-wood, a plantation yielding stout poles for training the vine; and in the ninth, a wood where mast grows."—(*Cato*, i.)

They made hay, and the process appears to have been the same as in modern times. After being cut it was turned with forks, piled into conical heaps, and finally into stacks or under cover. But the mowing was imperfectly performed; for, as soon as the hay was removed from the field, the mowers had to go over it again.—(*Varro*; *Colum.*, ii, 22.)

6. *Implements*.—The plough consisted of several parts: the beam, to which the yoke of the oxen was fastened; the tail or handle terminated in a cross-bar, with which the ploughman guided the instrument; it had a ploughshare, the share-beam to which it was fixed, and two mould-boards, a coulter, and a ploughstaff for cleaning the ploughshare.—(*Ovid. Pont.*, i, 8, 57; *Virg. G.*, i, 170; *Pliny*, xvii, 18, 19.) Some of their ploughs had wheels, and some were without coulters and earthboards. Besides this they had spades, rakes, hoes, with plain and with forked blades, harrows, mattocks, and similar implements.

7. *Operations*.—Ploughing was usually performed by two oxen, though three were sometimes employed. They were yoked abreast, and trained when young to the employment.—(*Cicero*, in *Verr.*, iii, 21; *Col.*, vi, 10; *Pliny*, xviii, 18; *Virg. G.*, iii, 163, &c.) They were usually yoked by the neck, but sometimes by the horns. (*Pliny*, viii, 45; *Colum.*, ii, 2.) There was but one man to a plough, which he guided, and managed the oxen with a goad.—(*Pliny, Epist.*, viii, 17.)

They sometimes ploughed in ridges and sometimes not. They did not take a circuit when they came to the end of the field, as is our practice, but returned close to the furrow. They were very particular in drawing straight and equal sized furrows.—(*Pliny*, xviii, 19, s. 49.)

They seem to have ploughed three times, always before they sowed, (*Varro*, i, 29;) and to stiff soils even as many as nine ploughings were given.—(*Virg. G.*, i, 47; *Pliny*, xviii, 20; *Pliny, Epist.*, v, 6.) The furrows in the first ploughing were usually nine inches deep. When the soil was only stirred about three inches it was called *scarification*.—(*Pliny*, xviii, 17—19.) They usually fallowed their land every other year.—(*Virg. G.*, i, 71.)

Sowing was performed by hand from a basket; and that it might be performed regularly the hand moved with the steps.—(*Colum.*, ii, 9; *Pliny*, xviii, 24.) The seed was either scattered upon the land and covered by means of rakes and harrows, or more commonly by sowing it upon a plain surface and covering by a shallow ploughing, which caused it to come up in rows, and facilitated the operation of hoeing.—(*Pliny*, xviii, 20.) They were particular as to the time of sowing, the choice of seeds, and the quantity sown.—(*Varro*, i, 44; *Pliny*, xviii, 24, s. 55; *Virg. G.*, i, 193, &c.)

Weeding was performed by hoes, hooks, and by hand.

In dry seasons the crops were watered.—(*Virg. G.*, i, 106.) If they appeared too luxuriant they were fed off.—(*Ibid.* 193.)

Reaping and mowing were the usual modes of cutting down the corn crops, but the ears were sometimes taken off by a toothed machine called *batillum*, which seems to have been a wheeled cart pushed by oxen through the corn, and catching the ears of corn between a row of teeth fixed to it upon the principle of the modern daisy rake. In Gaul the corn was cut down by a machine, drawn by two horses.—(*Varro*, i, 50; *Virg. G.*, i, 317; *Colum.*, ii, 21; *Pliny*, xviii, 30.) They do not seem to have ever bound their corn into sheaves.—(*Colum.*)

Threshing was performed by the trampling of oxen and horses, by flails, and by means of sledges drawn over the corn.—(*Pliny*, xvii, 30; *Colum.*, i, 6; *Virg. G.*, iii, 132; *Tibullus*, i, 5, 22; *Varro*, i, 52.) The threshing-floor was circular, placed near the house, on high ground, and exposed on all sides to the winds. It was highest in the centre and paved with stones, or more usually with clay, mixed with the lees of the oil, and very carefully consolidated.—(*Colum.*, i, 6; *Varro*, i, 2; *Virg. G.*, i, 178; *Cato*, xci and cxxix.)

Dressing was performed by means of a seive or van, and by a shovel, with which it was thrown up and exposed to the wind.—*Varro*, i, 52; *Colum.*, ii, 21.) It was finally stowed in granaries or in pits, where it would keep fifty years.—(*Pliny*, xviii, 30; *Varro*, i, 57.)

8. *Animals.*—Oxen, horses, asses, mules, sheep, goats, swine, hens, pigeons, pea-fowls, pheasants, geese, ducks, swans, guinea-fowls, and bees, are mentioned by various authors as products of the Roman farms. Directions for breeding many of these are given in the third and fourth books of the *Georgics*.

Such is an outline of the Roman agriculture; and in it our readers will doubtless find sufficient evidence to warrant them in agreeing with us that it was but little different from that pursued by the present farmers of England. We are superior to them in our implements, and consequently in the facility of performing the operation of tillage; we, perhaps, have superior varieties of corn, but we most excel them in our rotation of crops and in the management of stock. We differ from them, also, in not practising the superstitious rites and sacrifices which accompanied almost all their operations, (see *Cato*, cxxxvi, c.) but of the fundamental practices of agriculture they were as fully aware as ourselves. No modern writer could lay down more correct and comprehensive axioms than *Cato* did in the following words; and whoever strictly obeys them will never be ranked among the ignorant of the art. "What is good tillage?" says this oldest of the Roman teachers of agriculture; "to plough. What is the second? to plough. The third is to manure. The other part of tillage is to sow plentifully, to choose your seed cautiously, and to remove as many weeds as possible in the season."—(*Cato*, lxi.)

Such is an epitome of their agricultural knowledge; a knowledge which has since increased and can only in future be added to by attending to this advice of another of their writers: "Nature," he observes, "has shown to us two paths which lead to a knowledge of agriculture—experience and imitation. Preceding husbandmen, by making experiments, have established many maxims; their posterity generally imitate them; but we ought not only to imitate others but make experiments, not directed by chance, but by reason."—(*Varro*, i, 18.)

HORTICULTURE FOR THE SOUTH.

BY T. AFFLECK, OF MISSISSIPPI.

DEAR SIR: In common with your many readers, I have had much pleasure in perusing the very interesting and valuable articles on "Fruit-growing in the South," by Rusticus. The information they contain was just of the kind we most needed.

As your "City of the Bluffs" seems to have become greatly alive to improvement of late years, and many neat and home-like houses have been erected in and around the city, a few hints on planting ornamental trees and shrubs, with short descriptions of some of the less common and rarer sorts, may be apropos and useful.

We lack variety, as a general thing, in this class of trees and plants. In a climate in which a greater number of rare and extremely beautiful evergreens are;

perfectly hardy than in any other I know of—unless perhaps the Isle of Wight off the south coast of England, and doubtful if even there, we confine ourselves to some half dozen kinds. Nothing can be more beautiful than the Laurier Amandier, (*Cerasus Caroliniensis*,) Cape Jessamine, Arbor Vitæ, some of the Viburnums, Pittosporums, Euonymus, and Myrtles; yet there is a sameness in our lawns and door-yards, from the general and almost exclusive use of these, that might readily be relieved by the addition of some of the many others which are equally, and, in some instances, more beautiful.

So with our shade trees. The perpetually recurring Pride of China tree, beautiful though it be, to the exclusion of the scores of magnificent trees, native and introduced, is, to say the least of it, in very bad taste. It is a filthy tree, too, about a yard, when compared with many others.

As a shade and ornamental tree, there is none will compare with our magnificent Water oak and Live oak. The latter is the more beautiful and permanent, the former is of more rapid growth. Suppose that, instead of the China tree, your streets and pleasant bluff promenade had been lined and shaded with these oaks! By this time you would have had ornamental trees such as few cities can boast of. The Mobilians were alive to the beauty of the Live oak as a shade tree for their streets and squares, and see the result now!

The Cork oak, (*Quercus suber*,) the Holly-leaved and the Cut-leaved Turkey-oak are all very beautiful, though yet somewhat rare. I have fine young trees of all of them.

The Imperial Paulownia, with its immense leaves, and numberless spikes of blue bell-like blossoms, has been introduced some ten or a dozen years, and is quite an acquisition. It blooms here abundantly, both spring and fall.

The Varnish tree (*Stericlus platynifolia*) is so called from its beautiful glossy bark, and large rich colored leaves, which seem all to have been recently coated with green varnish. It is, altogether, a pretty and desirable ornamental shade tree.

The Croton tree, and Everblooming China are both pretty trees, though, in a severe winter, the ends of the branches are sometimes killed by the frost.

The *Acacia julibrissin*, or flowering Acacia, though by no means rare, is yet too showy, with its myriads of pink and yellow flowers, to be omitted in pleasure grounds, or even small yards.

Several of the Maples are natives here, and form, as elsewhere, most beautiful trees. Perhaps the best of these is the Scarlet Maple, so showy in the spring, with its bunches of bright scarlet blossoms. The ash-leaved Maple (*Nigundo*) or Box Elder, cannot be excelled as a shade tree in any country, where it has room to grow and spread. Several of the European Maples do well here, and are desirable trees.

The Chesnut is one of the most stately trees of the forest, and desirable not only as a lawn tree, but for its fruit. The large fruited Spanish is the finest.

Our Great Southern Cypress (*Taxodium*) should never be omitted, where the soil is rich and moist. The chief cause of its rarity in lawns, &c., is the difficulty of transplanting young trees from the swamp to the dry upland of our hills. With trees grown on dry land from seed, there is no such difficulty.

The graceful weeping willow, though so easily grown, is comparatively rare. The *curled-leaved* variety, being quite as *sweeping* in its habit as the other, is very curious. Each leaf is curled up like a cork-screw.

The Ginko (*Salsburia*) or Maiden-hair tree is pretty, and quite ornamental. The leaves are very curious.

The Double-flowering Peach is one of the most showy of trees, forming early in the spring a mass of wreaths of rich and extremely double rose-like blossoms.

Where there is room for a few large and wide-spreading trees, the pecan should not be overlooked. They afford a fine shade, and come into bearing in eight or ten years. We know of one gentleman in western Texas, who has some fifteen or twenty varieties of this delicious nut, which he has succeeded in multiplying by grafting. Two years ago, he sent the writer a quantity of nuts from each of eight or ten of the finest of his selections. These were planted, and have produced a fine lot of trees; the trees from each variety of nut show a wonderful family likeness, in foliage, habit of growth, &c.; whilst there is a marked difference between the lots. They have been all twice transplanted, and root-pruned each time; thus in a great measure obviating the difficulty in transplanting when the trees are older.

The mountain ash, or *Rowan tree*, dear to every Scotchman's boyish recollections, we have succeeded in acclimating. It is a beautiful tree.

The large-leaved magnolia, (*M. macrophylla*), from that same difficulty of transplanting from the woods, is quite rare in our gardens; where its magnificent foliage and immensely large and showy flowers fully entitle it to a first place. When grown from seed in the nursery row, there is no difficulty in removing it.

Of evergreen shade trees, the *Magnolia grandiflora* stands first. Like its companion, the *holly*, it is not easily removed from the woods. When quite young this may be effected, by lifting with a ball of earth around the roots, in the spring, and cutting off the leaves, but leaving the leaf-stalks. They well deserve that every available means should be used to secure both—the magnolia and the holly (*Ilex opaca*)—wherever shade and ornament are sought for. During the first three or four years from the seed their growth is quite slow, but afterwards they push up rapidly, and soon form handsome trees.

There is another holly, a native of the south and an evergreen, that is very generally overlooked. It is more commonly planted about Mobile than anywhere else. This is the *Ilex vomitoria*. The growth is slender, leaves small and numerous, and in winter the plant is covered with bright scarlet berries.

Of the various *Coniferae*, it is rare to find a plant in a lawn in all this region; unless, perhaps, an occasional long-leaved or old-field pine—both most noble and beautiful trees, and not planted one for a thousand that should be. There are many other pines, from all parts of the world, now to be found in the nurseries, and all desirable.

The spruces are the most prized of this family in Europe, although so common, that they are planted by the thousand to serve as screens to lawns and gardens, and to plantations of other less hardy trees. The Norway spruce, (*Abies excelsa*), the most common, is also the most beautiful. In fact, I know of no tree that equals it in gorgeous and impressive beauty. Some ten years ago, I imported a lot of fine plants of this and other spruces; and, as in every other attempt to import young evergreens either from the north or Europe, I saved but a very small percentage. Of those saved were two Norway spruces. For five years they did not make a growth of more than an inch each year! After that they shot up rapidly and are now beautiful, healthy plants, eight or ten feet in height. Since then I have been more successful in habituating young plants to the climate, and have fine young trees of several species of spruce.

The cedars are very beautiful. And, by the way, what we know as the *Red Cedar*, is a *Juniper*, bearing a small purple berry; the cedars are cone-bearing. *Cedrus deodara*, the great Indian cedar, is the most splendid tree of this family; perfectly hardy here and of very rapid growth.

Two new evergreen conifers, *Cryptomeria Japonica* and *Cunninghamii Sinensis*—the former from Japan, the latter from China—I look upon as great acquisitions. Both are at home in our climate; requiring, however, like all of these resinous evergreens, a light and sandy, but rich soil; and are most graceful and beautiful, yet curious ornaments to the lawn or door-yard.

Another of these, the great Chili pine, (*Arancaria imbricata*), has not succeeded so well; though I have now a few young seedlings that seem to feel themselves at home.

[To be continued.]

NEW METHOD OF RAISING FRUIT TREES.

The Patent Office is in receipt of information from England in regard to raising fruit in what are termed orchard houses, by planting small trees in pots. The writer says that a few old sashes, some posts and weatherboarding, are all that is necessary to constitute a house for trying the experiment. Some experiments were made last year under the management of Mr. Gordon, in the rose-house in the garden of the Horticultural Society, London. A variety of young dwarf fruit trees were placed in pots from twelve to fourteen inches in diameter, and as many as the house would hold were collected in it. This house is spanroofed, between fifty and sixty feet long, has half its sashes sliding down and the others fixed. There is additional ventilation through the doors, which fall down in the wooden sides, but there is no artificial heat. The success attending this experiment was highly satisfactory. The fruit was abundant, highly flavored, and of a superior quality, among which are classed strawberries, gooseberries, raspberries, currants, apricots, peaches, nectarines, plums, pears, figs, grapes, &c.

COTTON CROP.

The crop of cotton for the year ending September 1, 1855, was, as our readers know, less than that of the previous year; but it appears that the influences of war and dear food have caused it to sell at less rates. The aggregates are as follows:

Year.	Crop.		Export.		Per pound.
	Bales.	Bales.	Pounds.	Value.	
1854.....	3,262,882	2,252,881	987,833,106	\$93,596,220	9.47
1855.....	2,847,339	2,303,403	1,008,424,601	88,143,844	8.74
Decrease ..	415,543	.....	.....	5,452,376	73
Increase.....	.....	50,522	2,059,145	.....	.....

A larger proportion of the crop was exported out of the country, and at an average of $\frac{3}{4}$ cent per pound less money. The destination of the crop was as follows:

Countries.	1855.		1854.
	Bales.	Value.	Value.
Great Britain.....	1,533,142	\$57,616,749	\$64,736,401
France.....	470,293	19,035,423	14,532,712
Spain.....	82,198	3,320,034	3,663,246
Bremen.....	51,648	2,020,438	2,232,222
Sardinia.....	33,536	1,288,387	147,462
Belgium.....	28,838	1,042,437	1,342,962
Lombardy.....	18,831	751,622	991,451
Hamburg.....	18,672	761,572	1,304,138
Sweden.....	19,363	744,228	898,926
Mexico.....	25,917	744,509	1,245,294
Holland.....	11,243	418,438	567,482
Naples.....	2,830	109,724	31,631
Austria proper.....	1,939	85,052	1,370,402
British North America.....	2,053	87,006	415
Russia.....	1,025	48,647	301,293
Other points.....	1,884	72,393	.....
Total.....	2,303,403	88,143,814	93,596,220

The decline is pretty general, but more particularly to Sardinia and to Russia. These may have been, to some extent, affected by the war. As a general result, however, the south has given 2,059,145 pounds more cotton, and got \$5,452,376 less money than for the preceding year. That item, coming out of what should be not profits, in a year when food has been very dear, has formed a very material difference in the available assets of the planters. This year they are said, however, to be far better provided than usual with edible crops, in proportion to cotton raised.

OUR COTTON TRADE.

The following is an official statement of the exports of cotton from the United States for the year ending June 30:

Cotton export—in weight.

	Treasury year, 1855.	Treasury year, 1854.
Gulf and Upland.....	995,366,011	977,346,683
Sea Island.....	13,058,590	10,486,423
Total pounds.....	1,008,424,601	987,833,106

Cotton export—in value.

Year.	Total value.	Average per pound.
1855.....	\$88,142,844	8.74
1854.....	93,596,220	9.47
Decrease.....	5,452,476	.73

The distribution of the late crop to foreign States is registered as follows:

Countries.	Bales.	Value.
Great Britain.....	1,533,133	\$57,616,749
France.....	470,293	19,035,423
Spain.....	82,198	3,320,134
Bremen.....	51,648	2,020,438
Sardinia.....	33,536	1,288,387
Belgium.....	28,838	1,042,437
Lombardy.....	18,831	751,622
Hamburg.....	18,672	761,572
Sweden.....	19,363	741,278
Mexico.....	25,917	744,519
Holland.....	11,243	418,433
Naples.....	2,830	109,722
Austria proper.....	1,939	35,054
British North America.....	2,053	87,006
Russia.....	1,025	48,647
Other points.....	1,884	72,393
Total.....	2,303,403	88,143,814

The total crop of the United States, and the export in bales, reckoned at 437½ pounds each, were:

Year.	Crop in bales.	Export in bales.	Export in value.
1855.....	2,847,339	2,303,403	\$88,143,814
1854.....	3,262,882	2,257,881	93,596,220

THE OHIO GRAPE VINTAGE FOR 1855.*

CINCINNATI, OCTOBER, 1855.

Having conferred with some of the most successful grape growers of this region, I hasten to give you the results of my inquiries. Cincinnati is the centre of the wine region in the Ohio valley, and the Ohio river has not inaptly been called the "Rhine of America"—a name, which in after years, it may fully deserve. The "vine-clad hills" already afford a pleasing variety in the scenery around this city, and the vintage is anticipated with interest and solicitude. It is a new feature in the harvest of this rich valley, and a product that must before long form an important branch of our national industry.

This has been a bad year for the grape. Owing to the unusually wet season most of the vineyards suffered seriously from the "mildew" and the "rot." Some few escaped these diseases and produced crops of four to six hundred gallons to the acre; but the general average for the whole county will scarcely exceed 150 gallons per acre. Mr. Robert Buchanan's large vineyard of six acres produced 1,200 gallons. In the year 1853, which was the most favorable for the grape crop experienced for a long period, the yield averaged about six hundred gallons per acre on the best cultivated vineyards, and a few produced 800 to 900 gallons. Mr. Buchanan in that year obtained from five acres 4,236 gallons, or 847 per acre.

The quality of the wine made this year will be very good. The usual price of the juice from the press is 75 cents to \$1 per gallon, according to quality; after the first and second fermentation \$1 to \$1 50 per gallon. Within twenty miles around Cincinnati some fifteen hundred acres are planted with the vine, of which about one thousand acres are now in bearing, and may probably produce 150,000 gallons of wine the present season. This is about a two-third crop for the Ohio valley. The growth of the wine business is shown by the fact that in 1845 there were three hundred and fifty acres of vines in the neighborhood of Cincinnati, and in the year 1852 about twelve hundred. The value of the sparkling wines produced in 1851 was estimated at \$175,000. In Missouri and Illinois about eleven hundred acres are already planted, and the culture is rapidly increasing through the west and southwest. Tennessee and Georgia are particularly well adapted to the growth of the Catawba grape. The Catawba is our great wine grape, and is without a rival. It was found in the famous county of Buncombe, North Carolina, in the year 1802, by Col. Murray, and brought into notice as a wine grape by Major Adlum, of Georgetown, D. C., about the year 1820, and by Mr. Longworth at Cincinnati in 1825. Nearly all our vineyards are planted with this grape, which, with careful attention, produces a wine fairly comparing with the best average Rhenish and French sparkling and still wines.

In Cincinnati about 200,000 bottles of sparkling Catawba and 300,000 bottles of still wine are put up annually. Of the Isabella, Schuykill, and Herbemont grape a small quantity of wine is made every year, and the wine from the last named is growing into favor with many from its resemblance to the Spanish Manzanilla. Of late years the interest of the producer has been greatly advanced by the construction of wine cellars or large subterranean vaults in Cincinnati, and the establishment of regular wine-houses conducted by dealers of ample capital, and which serve to ensure a ready market for the product of the vineyards. The wine is kept in bottles well corked and sealed, and laid on their sides. The vines in our vineyards are set in rows, generally three by six feet apart, and trained to single stakes six or seven feet high. The grape bears its fruit on the wood of the preceding year's growth; hence two long canes as branches are always left to produce the next year's crop. These canes are cut down, one to a spur of two points, and another is left with eight or ten joints, and bent round in the form of a bow, and fastened to the stake with a willow twig or tie. The bearing shoots in summer are shortened in and the vine kept clear of superfluous wood, so as to admit sun and air to ripen the grapes. The ground is hoed or ploughed in May and kept free from weeds in summer, and the vines neatly tied to the stakes and trained from one to the other as the growth increases. The process is simple and easily understood. When ripe, in October, the imperfect and unripe berries are picked from the bunches of grapes and the perfect bunches passed through wooded rollers, or bruised in a tub with a beetle, mashing the

* From the Journal of Commerce.

skins and pulp, but not the seeds. The mashed grapes are then thrown into a press resembling a cider press, and the juice extracted. The juice, or must, is put into a clean cask, and the fermentation, which immediately commences, ceases in about a week. A second fermentation takes place in May following, after which the wine may be bottled, when clear. It is usually racked off from the lees in December or January, and before the second fermentation. From the lees and the pumice an excellent and high flavored brandy is made, which is now attracting considerable attention.

The demand for Catawba wine exceeds the supply, and the quality is constantly improved, both by the cultivators and those who prepare it for market. As regards the vine-culture, the future is full of promise.

THE CULTIVATION OF THE OLIVE IN THE UNITED STATES.

Mr. Robert Chisholm, of Beaufort, South Carolina, in answer to the inquiries of the Commissioner of Patents, gives a highly-interesting account of his experience in the cultivation of the olive. Mr. C. obtained his trees from the neighborhood of Florence, early in 1833. They were of two kinds—the small, round olive, esteemed the best for oil, and a much larger and more oval variety, upon which the first named was grafted. The winter of 1835, he states, was an exceedingly cold one, and killed to the roots all of the orange trees in the southern States, but did not in the least injure these olive trees. The trees at first did not improve rapidly, for want of cultivation. In order to remedy this, and at the same time pay expenses, sweet potatoes and field cow-peas were planted among them. This was found to succeed admirably; the trees grew rapidly, and soon began to bear fruit, which they have continued to do every year.

Mr. C. can now boast that he has made oil from the olive, but does not think that it is sufficiently remunerative to be prosecuted as yet, and so confines himself to pickling the fruit. His pickled olives are pronounced, by competent judges, superior to those imported from France. He adds that very few imported olives can now be sold in that section of country.

STATE AID FOR AGRICULTURE.

We perceive, says the Soil of the South, from our Mississippi exchanges, that our agricultural friends in that State are circulating a memorial praying the next legislature to add a scientific agricultural department to the State University. We applaud the movement, and would like to see it imitated in Georgia and Alabama. Both these States are filled with projects for State aid to railroads; and while we have no quarrel, nor do we intend to make any, with our public spirited internal improvement men, we claim that agriculture is just as much entitled to public favor. The whole railroad system, nay, the prosperity of the State itself, depends upon the agriculture of the country, and no surer step can be taken towards building a permanent and healthful national prosperity than by fostering the agricultural interests. Make our fields productive, reclaim our old fields, settle our population—do all this by improving our system of agriculture, and we will build the railroads. We know the value of railroads to agriculture, however, and repeat that we make no war upon them. We only insist that a *paramount* interest shall not be overshadowed by them. Alabama has done something in appointing a State geologist, whose labors during this year have been profitably expended in various parts of the State; but Georgia has not even done this much. One of her worthy sons, recently deceased, whose munificence has made his name as immortal as his State's, has handsomely endowed an agricultural professorship in the State University; but what has the State done? To her shame be it said, absolutely nothing. Our legislative halls are filled with planters; probably a majority of our law-makers belong to that profession, and yet they will meet and pass laws by the wholesale, and not one word is said about the great agricultural interests of the State. It is time this unnatural state of things should cease. If money is to be appropriated from the State treasury for any other purpose than to meet the necessary expenses of the government, we insist that the first appropriation *belongs* to agriculture. The legislatures of both States are shortly to assemble, and we trust that they will distinguish themselves by refusing to follow in the footsteps of their illustrious predecessors.

IMPROVEMENTS AT THE SOUTH.

We extract the following from the editorial columns of the *Montgomery (Ala.) Times*. We have been cheered by the same indications of improvement to which the *Times* alludes. An intelligent, permanent, rural population is the grand desideratum of southern civilization. Give us this, and we shall have accomplished more for southern agriculture, more for social happiness, more towards vindicating our peculiar institutions, more for the substantial prosperity of the country, than all the railroads which now traverse the land. We are happy to see that we are moving in that direction.

"WE ARE IMPROVING.—Recent visits to several counties of our State have afforded us an opportunity of noticing some signs of improvement. Plantation economy and management seem to be much more thoroughly studied than formerly, and agriculture, both as a matter of taste and science, is evidently engaging a good deal of thoughtful interest. Farm buildings are beginning, in many places, to have some pretensions to neatness and utility. Rude, misshapen piles of logs, without any reference either to safety or security, are being substituted by substantial structures, fit for rural purposes. Fields are better fenced and cleared; and although the country abounds in the miserable eye-sores of dead trees, defacing the landscape and spoiling the impression of the best plantations, yet there appears to be a disposition to remove these ugly ghosts, and make the country something else than a gigantic forest grave-yard. Dwelling-houses show a marked progress. The beautiful cottage, with its white-painted surface and green blinds, begins to delight the eye in every direction; and flower gardens, lending an additional charm to the sentiment of home, adorn the scenery of the roadside. Our roads have been greatly improved, and we have been particularly pleased to notice that bridges are not only more numerous, but more securely built. Then, too, there is a spirit of inquiry abroad among the people as to the progress of art and science. We observe much more of a disposition to make experiments in agriculture, and to apply the principles of chemistry to the cultivation of the soil. What has impressed us most favorably of all is the tokens of advancing domestic life. We see the most encouraging signs in this connexion. Our people are not only giving much more attention to the minor acts of living, keeping better houses, and having far more sensible modes of cooking, but they have more books and periodicals than formerly, while in many of their dwellings the cheerful sound of the piano, guitar, or harp, is heard. Next to progress in virtue and religion, we rejoice to witness the increased interest in taste—the culture of the beautiful in the midst of God's works, and the discipline of the soul to the divine harmonies of the universe. Our people are alive to the importance of education. It is their talk at the fireside and on the street. And we cannot doubt that the advancement we are now enjoying is largely attributable to the influence which the educated young manhood and womanhood of Alabama are beginning to exert."

EXPERIMENTS IN AGRICULTURE.

Well conducted experiments are the most reliable sources of agricultural improvement. Indeed, in the present state of those sciences which pertain to agriculture, theories unsustained by experience are to be received with great circumspection. On the other hand, experiments loosely made are arguments neither for nor against a theory, and the spirit which condemns the deductions of science upon the result of single careless experiment, is just as unfriendly to the development of truth as that spirit which embraces too hastily the conclusions of science unwarranted by the test of experience. We are yet but in the dim twilight of agricultural science, and its truths are too faintly ascertained to constitute the mere theory of the professor, a safe guide in the practice of the art; but when the deductions of the laboratory are confirmed by the results of the practical agriculturist, we may safely conclude that a reliable step has been made in the direction of true progress. It is cause of regret that so little effort has been made among us to secure the co-operation of these two sources of improvement in agriculture.

We have remarked that experiment itself is not infallible; indeed, it is often the source of fatal errors. A single swallow does not make a summer, nor does single experiment settle a principle. To be reliable, experiments must be care-

fully and repeatedly made. Two neighboring planters may determine to test the value of guano, for instance, as a fertilizer for cotton. A succeeds and B fails. Neither can safely conclude that he has settled the matter, but they should carefully compare the modes of application and cultivation, the varieties of soil and season, in order, if possible, to determine the causes which produced the difference in their results. The next year the experiment should be repeated with an eye specially to the operation of those causes which had seemingly controlled the previous experiment. And thus, by repeated tests and close observation, a valuable truth may be elicited. And so, two neighbors may differ about the utility of sub-soiling. One sub-soils and succeeds, another sub-soils and fails. There is a reason why the same operation should produce such contradictory results, and that reason should be ascertained. It may be concluded that the cause lies in the difference of the soils, and to test this, two fields of similar soils may be selected the next year, but the results may still be different. It may be accounted for then upon the supposition that the modes of cultivation are different. Another experiment may be made with special reference to this supposed cause, and still the experiments may produce different results. It will not do still to conclude against sub-soiling, because it has succeeded on one place as often as it has failed in another. Finally, after repeated experiments, it may be ascertained that the difference consists in the fact that one field needed under draining while the other did not; and thus, at last, the very important conclusion may be reached, that sub-soiling pays well where the land is dry, but that it is useless if the sub-soil is wet. We mention these cases by way of illustration, and so we might cite experiments in every department of agriculture and rural economy, but these suffice to enforce the idea that experiments must be cautiously conducted to make them reliable.

With but little labor and expense it is in the power of every planter to contribute to the stock of agricultural knowledge by a systematic course of experiment. Think what an impetus would be given to the cause of improvement in agriculture if our journals devoted to that interest were filled with the reports of such experiments. Each would thus contribute to his neighbor, and in turn receive the benefit of the labors of others. The injudicious expenditure of time, money, and labor, which some have made upon experiments in agriculture, have, in some instances, brought ridicule upon the attempts at agricultural improvement; but such failures are neither arguments against improved agriculture nor against experiments for that purpose. They resulted rather from the want of judgment in the experimenter than from any inherent difficulty in the object to be attained. We recommend no extravagant expenditure—none is necessary. In the ordinary management of the farm it is practicable to note carefully the different operations and the results which they produce, and a detailed report of such experiments as these will secure the advantages of which we speak.—*Soil of South.*

ADDRESS OF HON. C. C. CLAY, JR.,

~~Director of Library~~

Delivered before the Chunnenugee Horticultural Society of Alabama.

We make a few extracts from the copy sent us by the author:

It is unfortunate for the interests of the State that her people have been distinguished by sectional appellatives, separated by physical barriers, and alienated by dissociation. In consequence, jealousy, envy, heart-burning, and strife have prevailed where harmony, concord, and cordial co-operation should have existed, and have prevented that thorough political organization which is the chief end of government. Men and societies of men often war with, dislike or distrust each other, because they are strangers. Familiar acquaintance and free intercourse remove their harsh suspicions, unjust prejudices, and unnatural antipathies. Confidence, respect, and friendship are fruits of frequent and intimate associations. All obstacles to social intercourse tend to alienate and embitter men or nations; and hence, an English poet, with no less truth than terseness, has written:

"Lands intersected by a narrow frith,
Abhor each other; mountains interposed
Make enemies of nations, who had else,
Like kindred drops, been mingled into one."

As man's private attachments are increased by enlarging the circle of his acquaintance, so do his public affections grow with extending intercourse. Our love of the society to which we belong is the germ of patriotism and philanthropy. If we would cultivate these ennobling affections, let us remove all barriers to the social and commercial communion of our people; let us exert every power that art and nature afford us to annihilate the time and space which separate them, bring them into nearer neighborhood, and facilitate their free and frequent association; let us open broad avenues of commerce between the extremes of our State; let us organize State and county associations for the development of our physical and moral resources, in which ideas may be interchanged, truth may be ascertained, and labor may be so directed as to ensure it just reward. By such means we will obliterate geographical lines that distinguish different portions of our State; will eradicate sectional feelings that divide and distract her legislative councils; will liberalize the hearts and enlighten the understandings of her people, and teach them to know and feel that they are identified in interest, united in the bonds of a common welfare, and devoted to the same civil destiny.

Among all those designated by way of distinction as planting States, Alabama is foremost in the quantity of her cotton; producing, according to the census report, 23 per cent. of the entire crop of the Union in 1849; while Georgia, which stood next, produced 20 per cent., Mississippi 16, South Carolina 12, and Louisiana 7 per cent. The value of her products, as evinced in her exportations, elevates her still higher in the list of States, and discovers pecuniary prosperity not only surprising, but quite marvelous in so young a commonwealth. According to official returns for the year ending 30th June, 1852, she is excelled in the value of her exports by but two States in the Union, New York and Louisiana. And when we consider the sources whence those States derive a large portion of their exports, it would not be arrogant or extravagant to claim for Alabama precedence over them as an exporter. It is quite sufficient, to prove that she exceeds Louisiana in her products, to state that she has 154,861 more inhabitants, a larger quantity of cultivated land, and more persons engaged in tillage. Besides, she sends, annually, a large number of cotton bales to New Orleans to swell the exports of Louisiana. Indeed, bearing in mind that the productions of about one-seventh of the State (the northern part) go to New Orleans or the Atlantic ports, and a part of the cotton crop of East Alabama to Appalachicola, which together exceed what we receive in Mobile from East Mississippi, it may be safely asserted that the official returns fall below the real aggregate exports of our State. On the other hand, there are all the States north of the Ohio and several of the New England States annually pouring a portion of their treasures into New York, and helping to swell the aggregate of her exports; while that great Pactolus of American wealth, the Mississippi river, wafts to New Orleans the annual tributes of a region from which the world might draw subsistence. Hence, I repeat, Alabama may justly assert her right to the first place in the confederacy as an exporter, and may truly triumph over her compeers as most worthy to bear the banner of agriculture, whose emblems are peace, plenty, and power. When, too, we reflect that she is a child in years, but yesterday reclaimed from the Indian, whose foot-prints are still visible in her virgin forests, how marvelous her past progress! How incalculable her future attainments! And yet the plentitude of her riches, the magnitude of her power, and the brightness of her glory are attributable to a single production of her soil—the cotton-plant! The white autumnal mantle, spread over our fields by munificent Nature, exceeds in value the golden fleece, in pursuit of which the Argonauts incurred such miraculous perils, and achieved such prodigies of valor. It is not only a fleece of gold, but serves better than a coat of mail for our defence, being stronger proof against foreign weapons than iron or brass. Like the mysterious cestus of Venus, which lent charms to the most deformed wearer, and enkindled love in all beholders, the snowy cestus, which belts our confederacy, wins for us the admiration and friendship of the world. Gold and jewels, “the types of ignorance and barbaric pomp,” are useless, compared with this last great material of national industry and commerce, of human comfort and support. The auriferous shores of Australia or California are not so inviting to enterprise, or so nourishing to trade, or so impulsive to human progress, as this precious product of our soil.

We need not go, for proof, to Georgia or South Carolina, which, for some years, were almost the only cultivators of cotton, and, as late as 1820, grew more

than half of the entire crop of the Union, but now produce only about one-fifth of it. I can show you, with sorrow, in the older portions of Alabama, and in my native county of Madison, the sad memorials of the artless and exhausting culture of cotton. Our small planters, after taking the cream off their lands, unable to restore them by rest, manures, or otherwise, are going further west and south, in search of other virgin lands, which they may and will despoil and impoverish in like manner. Our wealthier planters, with greater means and no more skill, are buying out their poorer neighbors, extending their plantations, and adding to their slave force. The wealthy few, who are able to live on smaller profits and to give their blasted fields some rest, are thus pushing off the many, who are merely independent. Of the twenty millions of dollars annually realized from the sales of the cotton crop of Alabama, nearly all not expended in supporting the producers is reinvested in land and negroes. Thus the white population has decreased and the slave increased almost *pari passu* in several counties of our State. In 1825 Madison county cast about 3,000 votes; now she cannot cast exceeding 2,300. In traversing that county one will discover numerous farm houses, once the abode of industrious and intelligent freemen, now occupied by slaves, or tenantless, deserted, and dilapidated; he will observe fields, once fertile, now unfenced, abandoned, and covered with those evil harbingers, fox-tail and broomsedge; he will see the moss growing on the mouldering walls of once thrifty villages, and will find "one only master grasps the whole domain" that once furnished happy homes for a dozen white families. Indeed, a country in its infancy, where, fifty years ago, scarce a forest tree had been felled by the axe of the pioneer, is already exhibiting the painful signs of senility and decay, apparent in Virginia and the Carolinas; the freshness of its agricultural glory is gone, the vigor of its youth is extinct, and the spirit of desolation seems brooding over it. The prospect is calculated to fill the patriot's heart with painful emotions, and to impress upon the sensitive mind the truth of the poet's reflection:

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates and men decay."

If the planters of Alabama would prevent the shameful decadence of agriculture so palpable in Virginia and the Carolinas, they must banish the wild illusion which holds them spell-bound to the changeless, artless, exhausting culture of the cotton plant. They must abandon a system which is at war with nature and condemned by experience, and adopt such improvements in their mode of tillage, and such restoratives of their worn out lands, as science may suggest and skill may devise. They must learn the physical fact that all nature loves a change, and diversify their field labor by the introduction of other plants.

We must develop the great and various bounties which munificent Nature has provided. Blessed with a mild and genial climate, with alternate highland and lowland, mountain and plain, of fertile and various soils, admirably adapted to the growth of many grains and grasses, and the rearing of stock, why should we go to Tennessee, Kentucky, or Ohio for our flour, our horses, and our pork? Coal, which continues the chief source of English wealth, and in developing which within her own limits Pennsylvania has expended more than \$20,000,000—which adds more to man's comfort than any other mineral, and repays labor better than any other article of trade—exists in exhaustless strata in many parts of the State, but has not been developed by the hand of industry, or fully explored by the eye of science. Iron ore, of excellent quality and in abundant quantity, lies unsmelted, in close proximity to coal, wood, and water, while we buy of other States even our axes and hoes. We have timber trees as various and valuable as any country possesses—the ash, the husbandman's tree; the oak, the father of ships; the pine, equal to that of Norway; poplar, superior to that of Holland; and cedar, as durable as that of Lebanon; and yet, notwithstanding the great quantity of timber annually exported from the United States to foreign countries, and from southern to northern States, for manufactures, millions of acres, covered with these indigenous materials of wealth, lie unsold at \$1 25 per acre; and noble forests are destroyed by fire and the axe, merely to make way for the ploughshare. We have marble of finer grain, more alabaster whiteness, and more variegated beauty, than any in New England; indeed, it was seriously contended by some that the block Alabama contributed to the Washington Monument was Italian; yet the marble mantel-piece, or table-slab, with which taste

decorates the dwellings of the living, and the column, or obelisk, which affection rears in memory of the dead, are brought from Boston or New York. The prodigal waste and destruction, the insensate neglect and disuse of the materials of comfort, luxury, and wealth which lie around us, would excite the scorn or commiseration of an enlightened citizen of Massachusetts. Could a son of that barren land and rigorous clime, who was ignorant of the topographical features, soil, and climate of our State, and of the domestic history of her people, be translated on Dædalian wings, from his home of rock and ice, to the top of one of the mountains of Alabama, and thence survey the valley of the Tennessee, the Coosa or Cahawba, he would be enchanted with the commingled beauty and grandeur of the scenery. When told of the fertility of the soil and its many products, the richness and variety of the mineral ores, the number and gigantic growth of the timber trees, the numerous and rapid streams that emptied into our majestic rivers, the many and different mineral waters and their medicinal virtues, the mildness and brevity of our winters, and the length of our summers, moderated by frequent showers and balmy breezes, he would congratulate a people blessed with such munificent gifts of Providence. Surely, methinks he would exclaim, never was there a lovelier or better land, save that of promise, which burst upon the enraptured vision of the holy prophet from the summit of Mount Pisgah! Should he, however, be told of the abandoned fields, the forests destroyed by fire, the unworked coal and metallic ores, the waste waterfalls, the unfrequented mineral springs, the deserted villages which he would discover on traversing the country; of the failure of the planters to make their food and clothing, and of the annual emigration in search of other lands, with surprise and indignation he would ask, Why are these things so? What more is wanted to make these people prosperous and happy? Why are they discontented with their lot, and why do they neglect the means of attaining all earthly things? The answer is as simple and satisfactory as the question is natural. The reward is deemed inadequate to the labor necessary to the enjoyment of these bounties; there is no convenient market for the productions of such labor, and no trade to nourish the industry, or accumulate the capital requisite for their development. Our people are confined, by education, by custom and by habit, to tillage of the earth after a vulgar fashion, for a single purpose, the growth of cotton. This only they regard worthy of their time and attention, and this alone occupies all their thoughts and absorbs all their energies.

IS SLAVE LABOR IN THE CONSTRUCTION OF SOUTHERN RAILROADS TO BE PREFERRED TO FREE LABOR?*

I think the answer should be in the affirmative, and that owned by the road. Most of the railroads in the United States have been built by free immigrant labor; and it has led to the belief that the work requires more skill than can be expected from ordinary slave labor, and this has been a great and an expensive error. There is necessary to either labor the same skill to place and direct, and the same persevering attention to the faithful execution, but really the great work is mere labor. The objection to white labor is that it cannot be applied during the heat of a long summer and autumn, and is liable to interruption from sickness and uncongeniality of constitution and temperament, and that it is much more expensive. It is an indisputable axiom that below 33° of latitude a white man cannot stand labor in the open air for above eight months in the year, at any rate it is so with our usual workers who are foreigners. The Panama railroad commenced the experiment with whites and ended it with blacks from Jamaica. I shall say no more, and rest this truth to the general experience here. This labor, if practicable, should be by slaves to be owned by the railroad company, as cheapest and best; the negroes according to their suitability to be placed in the blacksmith's shops, the carmaker and wheelwright shops, the building of stations, and the mason's work on the culverts and viaducts, and the remainder to the other works of the road—a negro confined to a single employment is infinitely more efficient than in a diversity of occupations. In this arrangement there would be present profitable use, and a useful class of blacksmiths, wheelwrights,

* Alabama Planter.

carpenters, and masons, trained to the various wants of the road by the time it would be completed. These remarks are equally applicable to the Mobile and Ohio railroad, and if it does a business anything like what may be expected from it, it will require at least the use of one hundred prime men fully employed to keep it in operation. This, I think, would be the most advantageous and economic application of funds. If, however, subsequent experience should show that the care of the road after its completion would be better under free or contract labor, the negroes would always command a higher price when skilled than their cost. Their use in constructing the road would be for the interest on their cost over their expenses, and one half of their wages could not be so little as that interest. Can this be done? The answer must come from one acquainted with the fiscal concerns of the company, of which I am entirely uninformed. I will, however, make a suggestion of what I think the smallest amount that may be required. If it was double this, the charge for superintendence, &c., would be in relative proportion much less. The cost of 200 negroes in the usual gangs* would be about one hundred thousand dollars, and this should place an efficient force of one hundred workers, or as many as will make it so, into the railroad use, and leave enough on the company's farm to pay their expenses and the interest on their cost. If this is correct, the 100 workers should pay their interest, say \$8,000, and \$5,000 for all their expenses, say \$130 each, or collectively, thirteen thousand dollars. This, I think, can be done, and will be found to be under one-half of the present prices paid.

The application of this labor to the various wants of the road will require the superintending care of the president as now, and requires no remark. There may be some required as to the use of the inferior force of eighty head or more of women, children and the infirm, who will be worked on a provision farm, convenient of access to the road. This force, also, should be worked under the general superintendence of the president, to be assimilated in management to our usual farms under an overseer to be appointed or removed as he may see proper. This farm may do something towards the supply of provisions for the wants on the road, and the mules and other stock when not in use, and some unexpensive depository is wanted.

The above, with some changes in the price of transportation of the larger articles, as an inducement to give labor that direction, I think the road will not be long in feeling the benefit of.

I am aware of the fact, and admit its general trouble, that companies will not manage as well as individuals, but this is equally true of everything else, and there is nothing of value can be done that is not liable to some objection, and this, perhaps, as little as any other. The motive for this communication will, I think, take from it the appearance of fault finding, or the presumption of dictation. It was commenced to be general, but has imperceptibly become particular. I will keep for another communication the inquiry whether if the company cannot make the purchase, how far a private company could do the same thing, and hire their hands to the road.

Since writing the foregoing, I see that Mr. Morse, the State engineer of Louisiana, having under charge about one hundred negroes engaged on the river works, computing them as costing the State near two hundred dollars for expenses, and yet yielding a profit over white labor per annum of from \$23,000 to \$37,000. The extract is thus: "There is, however, one item not taken into the account, and that is the fact that negroes in this climate will, for the year round, perform much more labor than an equal number of white men. I think the difference is about two to three, or that twenty negroes will perform as much hard labor as thirty white men, which would increase the difference in favor of slave labor from \$23,422 to \$37,475 per year. The last difference is not alone owing to the fact that the negroes can work on during the sickly season, while many of the white laborers fail, but to the fact that they are better laborers, generally, and, in my opinion, do actually perform one-third more work. See De Bow's Review for August, 1855, page 195.

A PLANTER.

* I have made the estimate on the purchase of negroes with their families in the gang as the dictates of propriety and humanity as well as all experience show. If you expect labor you must make them comfortable.

THE LAMPAS IN HORSES.

A correspondent of the New York "Spirit of the Times" inquires as to the burning for the lampas, and whether that was the only cure for it. With the hope that we may perhaps save one horse from the unnecessary and terrible torture of the burning iron, we undertake to reply.

Burning for the lampas is as good and humane a remedy as is suffocation between two feather beds for hydrophobia. Both have been practiced by the ignorant, and both are effectual. The horse, to be sure, survives the infliction, while the feather bed patient is bound to die. Both of these barbarous remedies (?) have long been discarded by civilized and intelligent men.

We have occasionally had cases of this complaint in our stable, and have always attributed it to over feeding. But in no single case, however bad, within our knowledge and experience, has it resisted a course of bran mash, continued for a day or two, with the addition, in one or two instances, of a purgative of salts or aloes. (The first thought of our farm hands always was to take the animal to the blacksmith's to be burned.)

Youatt says: "The bars occasionally swell and rise to a level with and even beyond the edge of the teeth. They are very sore, and the horse feeds badly on account of the pain he suffers from the pressure of the food on them. This is called the lampas. It may arise from inflammation of the gums, propagated to the bars, when the horse is shedding his teeth—and young horses are more subject to it than others—or from some slight febril tendency in the constitution generally, as when a young horse has lately been taken up from grass, and has been over-fed or not sufficiently exercised. At times, it appears in aged horses; for the progress of growth in the teeth of the horse is continued during the whole life of the animal. In a majority of cases, the swelling will soon subside without medical treatment, or a few mashes and gentle alteratives will relieve the animal. A few slight incisions across the bars with a lancet or penknife will relieve the inflammation and cause the swelling to subside; indeed, this scarification of the bars in lampas will seldom harm, although it is far from being so necessary as is supposed. The brutal custom of the farrier, who scars and burns down the bar with red hot iron, is most objectionable. It is torturing the horse to no purpose, and rendering that part callous, on the delicate sensibility of which all the safety and pleasure of riding and driving depend. It may be prudent, in case of lampas, to examine the grinders, and more particularly the tushes, in order to ascertain whether either of them is making its way through the gum. If it is so, two incisions across each other should be made on the tooth, and the horse will experience immediate relief."

In lancing the gum for a coming tooth it is much better to nick the gum at the side rather than upon the edge above the advancing tooth. This is practiced with young children by most physicians. Any one troubled with a tender and swollen instep can comprehend the rationale of this. If he cuts his boot upon the point of pressure, he finds the boot puffing up more and more, but when he makes a few incisions on either side of the boot, near the sole, the pressure ceases, and his instep is at once relieved.

PRACTICAL FARMER.

We wish every farrier and blacksmith in the land who has been guilty of the barbarous practice of mutilating the mouths of horses with a hot iron for the cure of lampas, would read the foregoing, and be convinced of the ignorance under which he has labored.—*Southern Cultivator*.

HOW TO PLANT A TREE.

[We take the following excellent rules from the descriptive catalogue of "Selected Fruit Trees," cultivated and for sale at the Michigan Nursery, at Kalamazoo, by Hull & Baker:]

"As our interest demands that every tree sent from our establishment should be transplanted in the very best manner, (for it is in this that the reputation of a nursery in a measure depends,) we deem it necessary to give a short chapter on this subject. Many persons plant a tree as they would a post; they do not consider that a tree is a nicely-organized production, as surely affected by good transplanting as an animal is by good keeping. In planting an orchard, first let the ground be made mellow by repeated and deep ploughing, and then observe the following rules:

- "1. It requires two persons to plant a tree properly.
- "2. The holes for receiving the trees should be sufficiently large [and deep] to admit the roots entire, without bending or crowding them.
- "3. Trees should never be planted more than an inch or two deeper than they were in the nursery. Deep planting is often fatal, and always injurious, [though the subsoil should be thoroughly broken up, say to the depth of three feet.]
- "4. All broken or bruised roots should be cut off smoothly, with a sharp knife, on the under side, and be sure and shorten in and thin out the branches to correspond with the roots, so as to restore the tree to a proper balance.
- "5. Let one hold the tree upright while another person is gradually distributing the earth among the roots. The main secret lies in carefully filling in the mould, so that every root, and even the smallest fibres, shall meet the soil; and to secure this, let the operator, with his hands, spread out the small roots and fill in the earth nicely around every one. Shake the tree gently while the filling is going on. Nine-tenths of the deaths by transplanting arise from the hollows left among the roots of the trees by a rapid and careless mode of merely shovelling the earth around them.
- "6. After the tree is thus planted, press the soil gently but firmly with the foot. Water is not often necessary, although it is an excellent plan (if the roots are dry) to wet them before planting; and if it should be very dry for ten or twelve days after planting, one generous supply of rain or pond water may be beneficial, if some litter is placed around the roots at the same time.
- "7. Trees planted in the fall should not be watered; the autumnal rains will be all-sufficient.
- "8. If the trees are likely to be thrown out by the frost of the first winter, throw up a small mound of earth about the stems; or, if in the orchard, plough it so as to turn the back furrows up to each row and remove it again in the spring. [If the orchard be properly drained as orchards should be, there will be no danger or trouble from the frost.]
- "9. If your soil is not good, remove it from the holes and substitute good garden (or forest) mould; always remember that plants must have food. By enriching and improving the soil by good compost, five times the common growth may be realized. No one can reasonably expect that young trees will thrive in old sod land, but when a young orchard must be kept in grass, a circle should always be dug around each tree, covering the extremities of the roots. Cultivation of the land will cause the trees to grow more in five years than they will in ten years when it is allowed to remain in grass.

THE STATE AGRICULTURAL SOCIETY.*

Mr. Winthrop, in a speech at the banquet of the great Agricultural Fair of Boston, mentions that our State Agricultural Society was one of the first established in the Union. Is not this an additional incentive to our exertions to make it permanent? We hope our citizens will come forward liberally and endow it. Yesterday we noticed that thirty-nine gentlemen of Boston had subscribed \$500 each, and Mr. Winthrop and Mr. Wilder \$1,000 each, to the society in Massachusetts. It seems that Pennsylvania, South Carolina, and Massachusetts had the first State Agricultural Societies.

"You have called me up in connexion with one of them, 'The Massachusetts Society for the Promotion of Agriculture,' of which my excellent friend at my side (Hon. J. C. Gray) is President. That society, founded in 1792, has done much, and is still doing much. Its stock are hardly second to none in your pens this day. Its premiums are at this moment stimulating the invention of the whole country to furnish us with even a better mowing machine than those which have already been the admiration and wonder of the Crystal Palaces of both England and France. And I believe we shall have a better.

"I would be the last to rob this old society of any of its rightful laurels; but I am afraid I cannot insist on its being called the oldest State society in the country. The first American society of all was undoubtedly the Philadelphia society, to which you have just alluded, of which our own Timothy Pickering was the original secretary; and it is a most agreeable coincidence that this earliest American association, for the formation of this great American interest, had the same birthplace with both the Declaration of Independence and the Constitu-

* From the Carolinian.

tion of the United States. This was a city or county society. But in examining the minutes of this time-honored institution, (as printed in 1854, and kindly sent to me by a Philadelphia friend,) I found, somewhat unexpectedly, evidence that a much earlier State society was formed than that of Massachusetts. The Philadelphia Record of December 5, 1785, sets forth that a letter was received 'from Hon. William Dayton, esq., chairman of the committee of the South Carolina Society of Agriculture, enclosing a few copies of their address and rules, and soliciting a correspondence with this society.' This letter was dated November 2, 1785, and leaves no doubt, therefore, that South Carolina had established a State agricultural society at least some years before Massachusetts.

"It is certainly a striking circumstance that the year of its establishment was the very year in which the first five bales of cotton ever exported from America were entered at Liverpool; and were actually seized at the custom-house, I believe, on the ground that no such thing as cotton had ever been grown, or could ever be grown in America. Indigo was then the staple of Carolina, of which hardly a plant is now found upon her soil, and of which not a pound is exported. Allow me, Mr. President, in alluding to some of these facts, to propose to you as a sentiment for this occasion:

"Pennsylvania, South Carolina, and Massachusetts: The pioneers in the great cause of American agricultural improvement, with George Washington as its especial patron; may common memories of the past, and common interest in the present, and common hopes for the future, ever bind them together in the same glorious brotherhood."

CURIOUS PLANTS.

Almost everybody has heard of the wonderful walking leaves of Australia. For a long time after the discovery of that island many people really believed that the leaves of a certain tree which flourishes there could walk upon the ground. The story arose in this way:

Some English sailors landed upon the coast one day, and after roaming about until they were tired, they sat down under a tree to rest themselves. A puff of wind came along and blew off a shower of leaves, which, after turning over and over in the air, as leaves generally do, finally rested upon the ground. As it was midsummer and everything appeared quite green, the circumstance puzzled the sailors considerably. But their surprise was much greater, as you may well suppose, when, after a short time, they saw the leaves crawling along the ground towards the trunk of the trees. They ran at once for their vessel, without stopping to examine into the matter at all, and set sail away from the land where everything seemed to be bewitched. One of the men said that he expected every moment to see the trees set to dance a jig. Subsequent explorations of Australia have taught us that these walking leaves are insects. They live upon the trees. Their bodies are very thin and flat, their wings forming leaf-like organs. When they are disturbed, their legs are folded away under their bodies, leaving the shape exactly like a leaf, with its stem and all complete.

BOOK NOTICES.

1. "*Mortimer's College Life.*" by E. Jellay, author of "*Louis's School Days,*" &c.; with illustrations. New York; D. Appleton & Co., 346 and 348 Broadway. 1855.

2. *Clouds and Sunshine and Art: A Dramatic Tale;* by Charles Reade, author of "*Peg Woffington*" and "*Christie Johnstone.*" Boston; Ticknor & Fields. 1855.

We are indebted to the publishers of the above books, of which we give the titles in full. They are very readable, and will no doubt satisfy the popular taste in this department of literature.

We have received from Dr. E. D. Fenner, of New Orleans, a copy of a

pamphlet prepared by him upon the subject of the yellow fever epidemic at Norfolk. Dr. Fenner is an expert medical writer, thoroughly familiar with the subject of yellow fever. He remained some time at Norfolk during the prevalence of the epidemic, and he enters in this pamphlet very fully into the history of its progress and phenomena.

We have also received a copy of a pamphlet upon the subject of a "Grand Junction Canal," to connect the waters of the Mississippi and Lake Borgne. It is our purpose to notice and extract largely from this pamphlet in our next number. The matter is certainly one of great importance.



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